47th Annual Meeting, Muskegon, July 10 and 11, 1912

THE JOURNAL

OF THE

Michigan State Medical Society

Annual Subscription $2.00 | Published Monthly under Direction of the Council | Single Copy 25c

Volume XI—No. 6 | BATTLE CREEK, MICHIGAN, JUNE, 1912 | Whole Number 118

CONTENTS

ORIGINAL ARTICLES

EDITORIALS

(Continued on next page)

Next Annual Meeting M. S. M. S., Muskegon, July 10-11, 1912.
Office of Publication, 24 Main Street, West, Battle Creek.

Entered at the Battle Creek Post-Office, Feb. 25, 1910, as Second-Class Matter.

CONTENTS

(Continued from first page)

SOCIETY NEWS

MISCELLANEOUS

Next Meeting of American Medical Association, June 4 to 8, 1912, at Atlantic City

COUNTY SECRETARIES

The Editor will gladly send sample copies of the JOURNAL to any prospective new members you may designate

The Journal of the Michigan State Medical Society

PUBLISHED UNDER THE DIRECTION OF THE COUNCIL

Vol. XI BATTLE CREEK, MICHIGAN, JUNE, 1912 No. 6

ORIGINAL ARTICLES

THE TREATMENT OF DIPHTHERIA BACILLI CARRIERS

M. L. HOLM, M.D.
Bacteriologist to Michigan State Board of Health
Lansing, Mich.

During recent years the treatment of diphtheria appears to have become so thoroughly established that the subject no longer merits discussion either at medical meetings or in our standard journals. At the present writing, however, this is far from being the case with the diphtheria bacilli carrier. The fact is well recognized that if diphtheria is to be effectively controlled more attention must be given to the carriers.

In the large communities such carriers are constantly present prepared to kindle sparks of increased susceptibility into the flames of an epidemic.

Epidemiologists have observed that frequently diphtheria cases have been introduced into different localities without any spread although opportunities for such spread existed which, so far as could be judged, were as great as those which in other instances were followed by rapid spread of infection. This indicates that the presence or absence of diphtheria bacilli can hardly be regarded as exhausting the explanation of the occurrence or non-occurrence of diphtheria epidemics. Diphtheria epidemics are usually accompanied by a marked increase in the number of non-diphtheritic affections of the throat, further indicating that certain conditions are capable of increasing general susceptibility to throat affections and that it is at such times that diphtheria is most likely to spread.

Diphtheria bacilli carriers may be divided into two types: first, those who have recently suffered from the disease; second, contacts who have become infected but have not shown symptoms of diphtheria. A person having recovered from diphtheria may retain virulent diphtheria bacilli in his or her mouth or nose for anywhere from a few days to several months. In a majority of the cases morphologically typical diphtheria bacilli will disappear within two weeks after the throat becomes normal, but the number that exceeds this period is considerable and deserves more than passing notice. Persons with low susceptibility to diphtheria toxins may become infected with diph-

theria bacilli and carry the infection for a variable period without showing symptoms of diphtheria.

The discovery of a healthy diphtheria bacilli carrier at a time when there is little or no diphtheria in the community is not regarded by epidemiologists as being of much importance. The patient should be instructed in the prophylaxis of diphtheria and efforts should be made to hasten the disappearance of the bacilli but isolation or quarantine measures would hardly be indicated and would be impracticable.

At times when diphtheria is prevalent, however, infected contacts and convalescent carriers are of greater importance. At such times it is evident that conditions favoring the spread of diphtheria are present and healthy carriers are at least as important in controlling the infection as those sick with the disease.

Since the discovery was first made that diphtheria bacilli remain in the throat after the clinical lesions have disappeared, efforts have been directed toward hastening their departure by various methods. Many practitioners still seem to believe that the bacilli are affected by injections of antitoxin and it is largely for the purpose of dispelling this erroneous idea that this paper has been written. Antitoxin not only does not affect the diphtheria bacilli themselves, but the injection of frequent doses of antitoxin at intervals extending over prolonged periods may so sensitize the patient to horse serum as to be positively dangerous. Numerous antiseptics have been recommended for use in various forms as sprays, gargles, inhalations and as direct applications to the lesions. Such antiseptic treatment is of benefit in limiting the power of infecting others by its action on the superficial bacilli but experienced observers have concluded that the period in which the patient remains a carrier is not materially shortened and it appears that in some cases at least the period has unquestionably been prolonged. Injections of diphtheria bacilli bacterins and local applications of serum from horses injected with living or dead diphtheria bacilli have been tried with some apparent success; but none of these methods have come into general use.

Special attention should be given to unhealthy tonsils, adenoids or nasal growths. Such tissue may at times harbor diphtheria bacilli for prolonged periods. Pegler (1905) reported that he "had several times found that the cause of the lingering presence of diphtheria bacilli could be removed by carefully extirpating every trace of unhealthy tonsil tissue in which crypts could be discovered. In other cases he had found adenoid or nasopharyngeal tonsillar tissue to be the offending cause of the trouble."

It has occasionally been noticed that, following inflammatory lesions due to some other agent than the diphtheria bacilli, these organisms have disappeared from the throats. This brings to our attention the well-known principles of antibiosis which have been applied in the treatment of several other bacterial conditions. It has been recommended that the mouth be sprayed with suspensions of staphylococci in pure culture and favorable results have been reported from this procedure. The method undoubtedly is worthy of further trial. We have tried to make cultures of mixed bacteria from a normal mouth to be used in the same way. Good results have been reported from the use of such cultures; but our idea, which was to spray with a culture representing the normal bacterial flora of the mouth, has been abandoned because there appears to be no artificial culture medium which will grow more than a small proportion of the various bacterial species found in the normal mouth.

Apparently there is within certain limits what might be termed a normal bacterial flora for the mouth. These various bacterial species growing symbiotically and maintaining a saprophytic existence undoubtedly afford a certain amount of antagonism against the invasion of foreign organisms. When a diphtheria infection occurs the normal flora is destroyed either wholly or in part during the acute stages of the disease. After recovery the normal flora is gradually reestablished and the diphtheria bacilli disappear. If through vigorous use of antiseptics the restoration of the normal mouth bacteria be retarded, typical morphologic forms of diphtheria bacilli may persist for very long periods. Thus in several instances the swabs from recovered patients have given nearly pure cultures of *Bacillus diphtheriæ* for months after the throats had apparently become normal. In these cases when antiseptics were discontinued and the throats inoculated from a normal mouth the normal flora has been reestablished and diphtheria bacilli have promptly disappeared. The method employed is to inoculate a sterile swab from a normal mouth and rub it over the mucous membrane of the mouth and pharynx of the carrier. No mouth wash should be used for at least six hours after such treatment and after that time the mouth washes used should not be antiseptic. On the second day a swab should be taken for culture and examination. If positive, the process should be repeated, etc.

Our experience with this method has been very favorable and it appears to be well worthy of further trial. The chief objection to its use is the danger of transferring other infections and this should be very carefully guarded against. When cultured bacterial suspensions are used, this danger is obviated and if practical experience should indicate that equally good results may be obtained by use of cultures, the advantage is worthy of consideration.

913 Allegan Street, West.

RECENT ACTIONS OF MICHIGAN STATE BOARD OF HEALTH

1. The engagement of Edward D. Rich, Professor of Sanitary Engineering, Ann Arbor, to inspect the Michigan summer resorts. The board will insist on the establishment of sanitary principles in each instance. Special consideration will be taken of the water-supply and the disposal of garbage, sewage, etc.

2. A complete survey and investigation of public water-supplies will be begun immediately. A competent engineer will be given charge of this work. Samples of water from each supply will be examined in the State Board of Health Laboratory.

3. May fifteenth was set by proclamation of Governor Osborn as "Public Health and Clean-Up Day in Michigan." The plan has been taken up by a great many towns and cities and was undoubtedly well worth while.

4. The investigation of the extent, distribution and causes of feeble-mindedness, which has been conducted by Miss Adele McKinnie during the past six months, will be continued another six months. Miss McKinnie is a trained investigator in that line and is doing the department an excellent service.

5. State convention of health officers and others interested in public health work met at Ann Arbor, May 22 and 23.

6. A hotel inspector has been put into the field. He represents the Departments of Labor, Dairy and Food, and Health and so carries a great deal of authority.

7. The next examination for embalmers will be held July 10, 11 and 12 at Lansing, Michigan.

8. Dr. R. L. Dixon, secretary, has been delegated to represent the Board at the National Anti-Tuberculosis Congress, the Surgeon General's Conference, the Meeting of the American Medical Association, and the International Congress on Hygiene and Demography.

RÉSUMÉ OF TYPHOID FEVER AND ITS TREATMENT, BASED ON FOUR HUNDRED CASES OCCURRING IN SOUTH HAVEN'S EPIDEMICS*

F. C. PENOYER, M.D.
South Haven, Mich.

Typhoid fever is a subject so extensive that any one of a dozen points in the disease would give us material for an afternoon's discussion. Hence you can appreciate my difficulties in trying to bring to you anything that is not a rehash of typhoid experiences. I only hope to bring up some of the salient points in the disease as they appear to a busy practitioner at the bedside.

Typhoid fever is a general infection due to the *Bacillus typhosus*. The disease varies greatly in different epidemics and in different individuals. Cole is authority for the statement that it may last only a few days, and be associated with very little or no fever, or on the other hand there may be a continuous fever of great intensity lasting from six to twelve weeks or even longer. It has been shown that all of the clinical features of typhoid fever may be induced by the paratyphoid, or paracolon bacillus. These two conditions cannot be differentiated by clinical conditions alone, and many of our authors think it safer to treat both diseases alike. Two cases in my practice exhibited typical typhoid symptoms, with temperature rising 1 degree each day for a week, when it was 104 degrees. In both cases nurses were employed and on the seventh day temperatures became normal. Two other typical cases with less fever gradually became normal in seven days. These cases, through errors in following routine, relapsed and ran a continuous fever of great severity for many weeks. From bitter experience I have learned to care for these abortive forms during convalescence as thoroughly as the true cases. It seems as though the difference between the two forms is of no clinical consequence and thorough care should be exercised in convalescence from even the fevers of a few days' duration that have marked typhoid symptoms.

Someone has said that "typhoid fever is a crime." I appreciate the responsibility resting on me and am chagrined at the amount of typhoid in South Haven, although the physicians all have vigorously stated for ten years that it came from drinking the lake water. I am glad to say here that we will have a good supply of water from deep wells this spring. A few years ago the government appointed a commission to investigate the water of our Great Lakes. This commission reported that at times the whole body of water in the south end of Lake Michigan and Lakes Erie and Ontario was contaminated by colon bacilli. We are calling attention to the fly as carrier of infection, to the milk routes and to the so-called typhoid carriers, but I do not believe the profession realize the part that the Great Lakes play in the typhoid infection of this region.

We see reports at various times of epidemics of typhoid in South Haven, St.

* Read before the Kalamazoo Academy of Medicine, Jan. 10, 1912.

Joseph, Evanston, Muskegon, Escanaba, etc. These are due to the infected city water-supply, as we all know, but how many cases in cities miles distant from these points are there that come from these cities' water contaminations — these cases in turn becoming danger points of infection by flies or otherwise. I have known of at least fifty cases in surrounding country that come from drinking our city water. Cases in Covert — 9 miles south, and in Glenn — 10 miles north. This last summer I knew of two cases that returned to Chicago and three that went to Bloomingdale, 20 miles east of us. I have heard of these cases and others later and know that they were contracted in South Haven. I could state case after case in distant places that very possibly came from our epidemics and also know South Haven citizens that have returned from distant trips where evidently they contracted typhoid. No doubt these facts in regard to this state of affairs in our community are also true all along the lakes. I feel that it is the duty of the medical profession to more thoroughly urge the boiling of all water of unknown or uncertain origin, especially advising travelers to investigate their drinking-water.

In over 400 cases occurring in our epidemic during the past six years, some interesting points are brought to light. There was only 1 per cent. in the aged, 55 years of age and over; 3 per cent. under 5 years of age; and 96 per cent. between 5 and 55 years of age.

At a recent social gathering thirty people ate infected food; fiffeen adults contracted typhoid fever, and of the fifteen that escaped two were over 50 years of age, one was under 3, seven had had the fever within five years, evidently giving immunity, leaving five adults that escaped the infection without known reasons.

Our death-rate in the 400 cases has been 5.5 per cent. — below the average statistics, which run from 7 per cent. to as high as 12 per cent. In 150 cases I have had one death due to hemorrhage, one to embolism, one to perforation, two to toxemia, and two due primarily to chronic heart and kidney lesions. I have seen two cases and known of other cases where patients went into collapse, temperature subnormal, pulse weak, cold sweat, no hemorrhage, vomiting that became fecal in character, tympanitic, all signs of peritonitis except pain — patients all recovering. The diagnosis in these conditions was perforation, but as they all lacked the symptoms of first importance — pain — and all recovered without operation, I have always doubted the diagnosis and wondered to what the symptoms were due.

It has been said that if one had to choose whether he would have a good doctor and no nurse in typhoid fever or good nurses and no doctor it would be better for him to choose the latter alternative. While the details of treatment in ordinary cases must be largely in the hands of nurses, the doctor's care in looking out for the unfavorable features and giving treatment to guard against these should not be underestimated. I believe the first essential in the management of typhoid fever is absolute quiet and rest under the care of a competent nurse. Strict isolation and early adoption of routine of feeding, baths and typhoid management will prevent many of the distressing nervous and mental symptoms that appear later in the disease. I have repeatedly seen patients struggling to keep up with temperature of 104, and when placed in charge of nurse and under typhoid routine, the temperature subsiding 1 to 2 degrees within twenty-four hours.

Patients that carry the time of nourishment, medicine, etc., in their own minds do poorly. I have often seen mild cases, attempting home care, become the most severe and protracted of cases. The receiving of occasional visitors or letters, raising up in bed for food or drink, and many other trifling incidents will immediately produce a rise in temperature of patients and may prove serious. One of my patients in the hospital was visited by his wife ten minutes each day. He was running a mild course and felt perfectly well but temperature refused to leave, being prolonged to five or six weeks at 101. Temperature became normal in four days after she was requested not to visit her husband. It is here that the physician can do his duty by vigilance and a stiff backbone. I have seen serious and even fatal consequences follow a lapse in these matters of strict rest and quiet. Patients and nurses should be made to realize that it is a serious proposition and not one of entertainment, although the patient may be feeling well. These points cause me more anxiety in every case than the more serious conditions do, for in these latter it is easier to obtain strict adherence to directions.

In the first days of typhoid fever the steps to eliminate the toxin from the system are also of greatest importance. It has been recognized for a long time that patients who take large quantities of water do better than those who are unable to do so. Dr. Cushing of Cleveland is given credit for showing that typhoid patients can take enormous quantities of water and do better by so doing. Patients passing but 10 to 12 ounces of urine in twenty-four hours, after instituting this treatment for two or three days pass large quantities of urine, the nervous symptoms abate, temperature runs lower and a better general condition results. A rule laid down by Dr. Cushing, which I have tried to follow, is to give all the liquid the patient can take every half hour. They will take large amounts, when constantly pushed, and when nurses see patients brighten up, fever drop, and less baths necessary, they are willing to give extra attention to pushing the liquids.

I have followed in the early stages of the disease a vigorous giving of liquids with little food for three to five days, this consisting principally of fruit juice, with the whites of two eggs to a glass of lemon or orangeade. After a few days, depending on the severity of the disease, I have begun the routine feeding of the case. It has seemed to me in my own experience that where I pushed the diet too early the fever ran higher, symptoms of indigestion appeared, curds began to show in the stools and in the long run my patient took less food than where I refrained from regular food for possibly a week. In Johns Hopkins Hospital they give 4 ounces of milk with 2 of lime water every four hours, and the whites of two eggs with lemon juice every four hours. This gives 24 ounces of milk and twelve eggs in twenty-four hours, which although a perfect food, yields 800 calories, while the normal patient must have 2,000 calories and upward. Enough milk and eggs to supply the deficient calories would be impossible, for it would require 3 quarts of milk daily and no patient can take or digest that amount.

As you all know, the question of diet in typhoid is still in an unsettled state, a very few following the old starvation diet. Coleman and his followers going to the other extreme, feeding 4,000 calories, which excess is to make up for tissue loss due to high temperatures. This amount of food which he advises requires 1½ quarts of milk, 1 to 2 pints of cream, one-half pound milk-sugar, three to six eggs,

also bread and butter. I have always been sure my patients could not digest this amount of food. It seems to me, however, the amount fed typhoid patients is increasing, but my personal experience leads me to believe the feeding of solid and semi-solid diet is more in name than in deed, and its advocates go about it in fear, and end by giving a diet but slightly different from that ordinarily used. I do not believe in giving patients their choice and variety in diet to please their taste, unless it fits in with the routine of definite amount of nourishment. The giving of ice-cream, buttermilk, etc., may be all right but it is uncertain how much food patients get. The giving of a few spoonfuls of broth or gruel means nothing but starvation. I have found that patients can take two-thirds milk with Horlick's malted milk or Mellin's food and digest this better than plain milk, and 7 ounces of this every three hours will give 1,200 to 1,400 calories. If this does not agree with the patient and curds appear in the stools I give 2 heaping teaspoonfuls of Horlick's malted milk every two hours, or a caloric value of 800. While this is not much better than the milk and egg diet in caloric value, it can be used where milk cannot at all, the high carbohydrate element conserves the nitrogenous waste as stated by a large number of students of this question, and it has not in my experience raised the temperature and caused the tympanites that gruels have.

The subject of the application of hydrotherapy in typhoid cases is too well known and too broad to be but touched on in my paper. In our South Haven cases, as far as I know, there has been no attempt at tub baths, and in fact I have not heard of any physician using them in private practice. Our authors go into details describing tub baths, but I doubt if they are used by the profession out of hospitals, or very much in them. In questioning many nurses that I have met that have taken courses in cities of east and west none have had experience in the baths. We have used sponge baths almost exclusively, and have come to the study of the kind of sponge bath best adapted to the individual being treated. I prefer cold sponge if the reaction and drop of temperature occurs. Believe the reaction is the important factor in bettering patient's condition. Have seen patients with high temperature and delirium given cold bath, producing cold extremities and no reaction following and the temperature raised. Hot baths will many times reduce this temperature in nervous patients, obtaining good reaction, and decided quieting effect to the distressing mental symptoms.

I have come to use a method that I believe is worthy of investigation in this class of cases, where the sponge baths do not lower the temperature or affect the delirium and mental symptoms in any way. This is a method of giving cold colonic flushes for reduction of temperature. In a recent case, for example, with an excellent trained nurse in charge, temperature ran 105.5-106; sponge baths had no effect whatever in any way applied. Patient became unconscious, lost hearing, neck stiff, muscles twitching, pupils widely dilated, and desperately sick. Used small colon tube inserted with care just well through the sphincter muscle, 1 to 3 pints of water, temperature 40 to 50 F., passed in small quantities into colon and allowed to return through tube. Half hour later temperature 101 to 102, pulse fuller, better color, pallor having disappeared, twitching lessened. This was repeated every four to six hours if temperature reached 105 and was not reduced by sponge. Patient in four days was running a temperature 101 to 103, mental symp-

toms abating and in fair general condition. When I first began using this method in this class of cases I was afraid of handling the bowels so much, and it may be inadvisable, as one man's experience does not prove a rule. It seems to me theoretically, however, that the cold will quiet peristaltic action and not be dangerous, will constrict abdominal vessels and produce reaction and surface radiation, bring cold to inflamed areas which is physiologically correct, reduce temperatures, quiet patient and strengthens heart action. I have used it more or less in a considerable number of cases with good results. Have only used it in those severe cases in which we might expect hemorrhage and other serious complications and have seen no bad effects from its use.

In our cases in South Haven the vaccine inoculation has not been tried at all. Its value as a prophylactic is proved, but its worth in treatment is still to be demonstrated to the profession. A few words here as to the status of typhoid vaccine may be of interest. A culture of typhoid bacilli grown on agar is washed off with normal salt solution and the culture then killed by subjecting to 55 C. for one hour. This is then standardized so that 1 c.c. shall contain 1 billion bacilli. The immunizing dose is given in three injections of ten-day intervals, one-half c.c. to first injection, 1 c.c. to second and third.

It is to the records of our army that we must look for the practical value of the work. Over 60,000 men in our army have been vaccinated and among this entire number and covering a period of three years but twelve cases have occurred. In the maneuvers at San Antonio, Texas, last year, 12,000 men occupied the camp from March to July, but one case developed, and this a man that had not completed the inoculations. There were forty-nine cases and nineteen deaths in the city of San Antonio during the same four months. At Galveston 4,000 men were in camp during these same months, using same water, milk and food-supply as city. One hundred and ninety-two cases accurred in city and none in camp. The vaccination is now made compulsory in the United States Army.

The treatment of typhoid by inoculation is still in the experimental stage. No reports are yet available of large numbers treated. All that report the treatment agree that it has done no harm. It is probable that those that reported negative or discouraging results at first have been using the vaccines in too small dosage, 10 to 100 million to 1 c.c. being the early dosage. With increasing confidence the dosage has been increasing until at the present time it is 100 to 500 million and better results are reported.

The management of convalescence requires just as much and even greater care than the attack. I have seen so many relapses occur at this time that every case is on my nerves more than when seriously sick. My personal observation leads me to believe a liquid diet should be continued for seven days, then cereals added and after tenth day soft toast, eggs, custard in gradually increasing amounts, given; scraped steak or baked potato given at twelfth to fourteenth day. Patient should be kept in bed with regulation as to quiet and rest for two weeks after temperature is normal, then propped up on back rest and allowed to get up gradually during the third week. Visitors, excitement, reading to patient, reading of letters, etc., shaving and any of a countless number of things have caused me trouble during convalescence. I fear nervous influence and fatigue more than overfeeding. One

patient died during a relapse caused by receiving a Christmas gift, ten days after normal; a boy patient was given stamps that had been collected during his sickness; temperature taken before and after shows 1.5 degrees rise. One patient became excited over a bill sent in two weeks after fever was gone, temperature went to 103, and relapse was result. There is no disease where the patient becomes so weak and the effect on the nervous system becomes so marked as in typhoid fever.

HEXAMETHYLENAMIN

D. Vanderhoof, Richmond, Va. (*Journal A. M. A.*, February 3), says that since its first introduction into medicine hexamethylenamin has become widely extended in its therapeutic applications. As a result of the suggestive reports of its utility when given by the mouth and the evidence of its elimination through various secretions he began to employ this drug in the fall of 1910 in all cases of common colds that came under his care and in patients suffering from acute or chronic bronchitis. An investigation of the literature supported his views, showing that it could be of value in these conditions. In his treatment of colds with this drug no other remedies have been employed except an initial purgative and subsequent care to see that the bowels remain open. Large doses were found best, and as a routine he gives 10 grains dissolved in a glass of water four times daily for three to seven days, after which it is discontinued. The patient is instructed to drink water copiously during the time the drug is being taken and he has had but one patient that complained of any irritation of the bladder, which ceased promptly after omission of the drug. Two cases of chronic antrum infection which had resisted operative measures and prolonged local treatment induced him to recommend this treatment as a prophylactic against sinus infection from common colds. In the treatment of both acute and chronic bronchitis hexamethylenamin produces results, he says, that are incomparable with the usually employed remedies. It is decidedly effective in colds when the bronchitis stage has been reached, but its chief value is in preventing this. Some cases do not respond to it and in these it is presumed that structural changes have occurred that would preclude the hope of successfull treatment by any remedy.

The literature of the therapeutic uses of hexamethylenamin is briefly reviewed by I. H. Prouty, Bellows Falls, Vt. (*Journal A. M. A.*, April 20), who says that, in his cursory examination, he was unable to find any reference to the use of the drug in the treatment of orchitis. He therefore reports a case in which it was used with success and which has also the additional interest of being one of the comparatively rare instances of this complication of tonsillitis. The patient was a 20-year-old typesetter of good habits without specific taint, as far as could be discovered, or evidence of blood poisoning. The swelling of the testicle occurred during an attack of tonsillitis, in which treatment by acetylsalicylic acid was ineffective. In view of the bactericidal properties of hexamethylenamin when decomposed within the body, it occurred to him to give it a trial. It was administered in 15-grain doses every six hours. What appeared at first to be a severe inflammation very rapidly disappeared within a short time. Of course, a single case is not conclusive of anything, Prouty says, but it seems to him to justify a further trial in similar non-venereal cases.

NOTE CHANGE OF DATE OF ANNUAL MEETING
TO JULY 10 AND 11, 1912

CLEARER DIAGNOSIS AND SIMPLER TREATMENT*

LUCY N. EAMES, M.D.
Muskegon, Mich.

"If I had the time to find a place
And sit me down full face to face
With my better self that cannot show
In my daily life that rushes so,
It might be then I would see my soul
Was stumbling still toward the shining goal:
I might be nerved by the thought sublime
If I had time!" —*Richard Burton.*

At the risk of incurring your just criticism of "presumption," I have chosen to write on clearer diagnoses and simpler treatment. It is said by Charles Egbert Craddock, "There are few exercises so entertaining as to preach with no sense of participation in sin." Therefore the exercise this evening is not entertaining to me, because I do participate in the sins I shall enumerate, but I have the satisfaction of knowing I am in good company.

Medical science might almost be said to be an achievement of the last century. Before that time there was much teaching, a great deal of mysticism, more guess work, but little real knowledge. The perfection of the microscope opened the broad vista of bacteriology with its antitoxins and vaccines and of hematology with its serum-therapy. The discovery and perfection of anesthesia has rendered what seemed impossible once a commonplace now. The *x*-ray of late years has laid bare the inner recesses of the human body in a truly miraculous way. But as Mr. Dooley says, "What diff'rence does it make to ye how far ye move forward, if ivery thing else moves forward ahead of ye?"

The great discoveries are not all made by the professors in our colleges. The man who works is rewarded, if not by discoveries, at least then by a sense of work well done, which after all is the greatest reward the world can offer. It comes alike to the man who treats a coryza or a fractured hip, if the work done is equally well done.

Our great poet, James Russell Lowell, has put it thus:

"The longer on this earth we live
And weigh the various qualities of men,
The more we feel the high stern-featured beauty
Of plain devotedness to duty.
Steadfast and still, nor paid with mortal praise,
But finding amplest recompense
For life's ungarlanded expense
In work done squarely and unwasted days."

How many times has a dissatisfied patient come to your office from another doctor's, with a history of "grip" which has lingered for weeks. You examine the chest and find undoubted signs of tuberculosis. The other man has never examined the chest at all, but has kept the patient's bottle full of "White Pine Expectorant Mixture." It has occurred to me that certain physicians classify diseases into two great divisions, (1) certain known diseases and (2) "grip." Everything that defies classification falls under "grip."

Or, again, a patient complains for a long time of indigestion, pains and gas, and the doctor hands out box after box of "Papayans — Bell," or Caripeptic tablets. No physical examination or stomach analysis is ever made, and some bright day the

* Read before the Muskegon-Oceana County Medical Society, March 22, 1912.

patient screws up his will to the point of visiting another doctor, and the latter, after opening the abdomen, brings to light a double handful of gall-stones.

Or, again, a patient grows anemic, vomits, has some pain in the stomach, and the physician, without any examinations, lightly turns it off as "neuralgia of the stomach." Another physician finds a distinctly palpable mass and calls it "carcinoma of the stomach."

The way some doctors arrive at diagnoses would puzzle some of our college professors. For instance, a girl of 20 is treated for "kidney trouble" — you know, just kidney trouble — but the doctor never examined the urine. She had backache but no edema, no headache, heart and vessels normal, eyesight good. I found the urine normal in specific gravity, with no albumin or casts. Patient says the urine looks "bad" sometimes. Such a time I found phosphates. Now, how could a doctor know such a patient had kidney trouble and what is "kidney trouble" anyhow?

What manner of intuition leads a doctor to make a diagnosis of inflammation of the ovaries in a chaste young woman of 16, without any pelvic examination? On pelvic examination, tubes and ovaries are found normal.

Again, a patient has a sharp pain located exactly down the course of a nerve trunk, painful on pressure and on motion. Why should a physician diagnose "rheumatism" in place of neuritis?

Every profession is burdened with its below-grade workers. There are the machine-like teachers, the shyster lawyers, the botchy dressmakers, the hypocritical clergymen and the quack doctors. But, thank fortune, every profession has its Froebel, its Blackstone, its Worth, its Phillips Brooks and its Mayos.

We need never fear to impress a patient with our ignorance if we confess to him that we don't know what is the matter, but that we need study on the case. The doctor who loses ground is the one who really doesn't know, and won't say so, and doesn't care to find out. Most patients are elated at the prospect of having something interesting the matter with them. The snap diagnosis pleases him who makes it more than it does any one else.

If the internist, who sees a dozen cases where we see one, of both common and rare diseases, finds it needful to study, why not we also? And especially so, when so many patients really court that kind of work. It is sometimes a week before one can be fairly certain of a diagnosis, but during that week one has not retrograded in professional ability. As one has said, "Growing is like falling — it is all right so long as you keep on; the trouble comes when you stop."

The diagnosis of a case depends on (1) history — family and personal; (2) physical findings; (3) laboratory findings; (4) reason.

Sometimes in the strain and stress of a busy day we neglect to secure sufficient history such as any previous indication of tuberculosis either as a prolonged cold or cough, night sweats, afternoon temperature, loss of weight, enlarged glands; or of syphilis, as primary sore, secondary symptoms, frequent miscarriages, lightning pains, and so on; or of scarlet fever with attendant edema, otitis media or heart complications; or of gonorrhea; or of family history of cancer, epilepsy, degeneracy, alcoholism; or the personal history of alcoholism or other excesses; of induced abortions; of headaches; backaches; jaundice; or injuries.

Many patients who come in complaining of stomach trouble have poor teeth and never masticate well. Many have been brought up from babyhood on white bread and poor coffee. Many have always

"pieced" between meals. Many girls who clerk, lunch at noon on an ice-cream soda. Others spend every spare cent on Ten-Cent Store candy. Oftentimes the history of stomach trouble in a young girl requires a pelvic examination, or at least an examination of the breasts, to exclude pregnancy.

I believe we fall down more on physical examination than in any other part of diagnosis. In every case we treat we ought to know the condition of heart and kidneys. By a routine examination of every patient we discover many things incidentally. To listen with ear to chest through the clothing may look learned, but it is a poor system, especially in the case of many of our foreign-bred patients who are dressed on the plan of an onion, requiring layer after layer to be peeled off. The chest should be studied in a good light, both in inspiration and expiration. The two sides should be compared by inspection and palpation. The abdomen furnishes abundant scope for the examining hand. The examination of McBurney's point would clear up a good many cases of indigestion. The pelvic examination is often of the greatest importance. Reflexes should be tested if there is any indication. The nerve roots should be examined to determine if there is tenderness.

When all has been done that the general practitioner can do in the way of physical diagnosis, there is still left the specialist to consult particularly on matters of the eyes, ears, nose and throat. I believe we could treat many cases more intelligently if we sought help of the eye specialist more than we do. When all this has been done, there is still left the examination under anesthesia and the exploratory operation, when indicated, to help us determine what ails the patient.

But before the last-named alternatives are resorted to, when the physical findings and clinical history leave us apparently battling against an unknown foe, there is the laboratory which throws a far-reaching searchlight on many a dark problem.

Everybody examines the urine, even the wonder doctor who moved out to Grand Rapids. Many very wonderful things have been guessed at from the urine, but many other things that are important and sensible can be determined by a careful chemical and microscopic examination. We can often determine whether pus comes from the bladder or kidney, a matter of some consequence. We can determine the kinds of nephritis usually. We detect intestinal indigestion by the presence of indican and oxalates. We have a fairly good test for typhoid or measles in the diazo, and we can foretell the approach of the crisis in pneumonia. We can keep reliable tab on the patient with nephritis or diabetes — if we keep our test-tubes clean.

When the sputum examination is reported positive, the result for diagnosis is very satisfactory, but I wish patients could learn that when it is negative once, that does not clear their skirts of tuberculosis. It should be again and again examined to be sure. Often we get the test very early, before we have many symptoms. Happy is the doctor who makes his diagnosis early in tuberculosis!

To examine the pus in the eyes of the new-born is of prime importance. Likewise to examine the pus of the cervix or the urethra early is of consequence. The old chronic cases are less satisfactory.

Laboratory tests of blood are to me of the greatest interest. When tempted to feed Blaud's mass to a white-haired, white-skinned Swede, I have found her to possess 90 per cent. hemoglobin and 5,000,000 red cells. How foolish it would have been to have induced a constipation

and perhaps some indigestion by giving iron to a perfectly normal patient! Another patient of mine, suffering from fibroid of the uterus, is the picture of health, red-cheeked and fat, but, alas, her hemoglobin was 40 per cent. and her red cells 2,500,000. Anyone would have called the latter healthy and the former anemic. So one cannot always tell the blood conditions by looking at the patient's lips. The hemoglobin and the red cells sometimes correspond, but often do not. How one dares to make a diagnosis of pernicious anemia or leukemia without a blood examination, I cannot see. If we had no electric lights we could use candles; but we have electric lights. Then again in the matter of infections, the white count is of the greatest value in diagnosis, treatment and even prognosis. A differential count with both a high neutrophil and a high eosinophil count, in leukocytosis, means gonorrhea. A high eosinophil percentage often indicates intestinal parasites or some form of skin eruption.

Gastric analyses are most satisfactory for diagnosis because the treatment is so evident, after the test is made. The stomach-tube turns a stomach inside out as a boy turns out his pockets, and shows us what is going on.

The Wassermann test for syphilis, though expensive, is worth the money to clear up the diagnosis in obscure cases. It costs $11 now and the delay of a week to get the report.

The tuberculin test either as the Moro skin test, the Calmette eye test, or the von Pirquet vaccination test, is of great significance, though often in isolated cases its value is disputed.

The study of blood-pressure, especially in those patients past 50 who have worked hard, or have lame hearts or kidneys, is to be recommended. The machine is so simple that any one can work it.

Reason, after all, is the most cogent aid to diagnosis. To weigh the worth of each sign and symptom and bit of evidence and to formulate a clear idea of the morbid process going on, even though we do not name it, take gray matter, and also we sometimes think of ourselves as "Poor Percy! Brains he has nix!" When we understand the pathologic condition, then we can fit the remedy to the case with precision. Then we shall cease to hear of a "touch of typhoid" lasting three days, or "just a little kidney trouble" when we mean cystitis. Arnold Bennett in his "How to Live on Twenty-Four Hours a Day" says: "I am entirely convinced that what is more than anything else lacking in the life of the average well-intentioned man of to-day is the reflective mood."

It is an easy thing to grow lop-sided in our mental processes, and herein lies a danger in making diagnoses. One man goes strong on history and forgets the laboratory. That is the old practitioner who brought the patient into the world and therefore knows all about him without ever having to examine him since he tied the cord and laid him aside in a warm shawl.

The man who bases his all on physical diagnosis is better than the other, but not complete.

The laboratory enthusiast is apt to want everything reduced to a slide or a test-tube and then he comes from Missouri and "wants to be shown." Laboratory reports are usually positive or negative, but here again results must be fitted into clinical findings. I do not believe in laboratory findings alone and I haven't much interest in the physician who, without any work on his part, expects a dollar's worth of laboratory work to clear up his whole diagnostic horizon and make him shine as a Solomon unto his patient. Sometimes the laboratory can do just that thing, but it cannot in all cases.

Above all things cultivate a clear, concise method of thought which shall make impossible the "muddled" diagnosis. Weigh each bit of evidence, fit each piece together, and the problem will be solved — x will equal something tangible. It took Ralph Waldo Emerson to say: "I look on that man as happy who, when there is a question of success, looks into his work for a reply, not into the market, not into opinion, not into patronage." He also says: "A great part of courage is the courage of having done the thing before. And, in all human action, those faculties will be strong which are used."

"I wish I could talk to myself as I left 'im a year ago;
I could tell him a lot that would save 'im a lot
Of the things 'e ought to know."

Rudyard Kipling's expression might well be used for the doctor and the Pharmacopeia since the work of the Council on Pharmacy and Chemistry.

After the diagnosis is made, the treatment is usually relatively easy if we will allow it to be so. But we must keep constantly revising our armamentarium to be in the latest spring or fall style. First they taught us the harm and the fraud of soothing syrups, Peruna, and Lydia E. Pinkham's dope. We nodded in approbation. Next they took up some of the things we had given patients — Pepto-Mangan, Unguentine, Glycothymaline — and we sat up with open eyes and wondered why we were so gullible as to believe their pseudoscientific advertising letters. Now we have settled down to expect to hear most anything about the drugs we use, and I think we are just beginning to get real sense about prescribing. We are coming to see with Uncle Eben that "it's jes' about as hard to pick good advice as it is to do yo' own thinkin' in de first place."

There are a great many remedies on our shelves and in our cases which we know haven't much of any value, but back there somebody used it for something, and we continue giving it "as a routine." The sooner we get out of the rut, even if it turns the whole rig over, the better for our minds. I hardly dare mention what I think some of these remedies are for fear I shall touch somebody's favorite and thereby I shall sow dragon's teeth. Suffice it to say that we could practice the art of healing for a long time with success and use only a dozen or so of our present remedies, such as digitalis, opium and its derivatives, ergot, strychnia, belladonna, mercury, arsenic, iron, quinin, anesthetics, etc. It is not necessary to confine our practice to these, however, for there are many newer remedies, like salvarsan, antitoxin and vaccines, that are of the greatest value. But we are still cumbered by hundreds of drugs which our high school friends would call "junk." How many dozens have we seen outgrown and outworn ourselves?

It is, moreover, practical to use single and simple remedies. Here is a place where our Homeopathic friends "have us beat." To them a set of symptoms indicates a certain drug; to us it indicates a Parke-Davis or an Upjohn pill containing from one to a dozen drugs, many of which we would never think of prescribing alone, because we know they are inert. For instance, take the Brown-Séquard pill for neuralgia (and the bottle is in the hospital pharmacy).

Ext. hyoscyamus	⅔ gr.
Ext. ignatia	½ gr.
Ext. opium	½ gr.
Ext. belladonna leaves ...	1/6 gr.
Ext. conium fruit	⅔ gr.
Ext. stramonium leaves ..	1/5 gr.
Ext. aconite leaves	⅓ gr.
Ext. Indian cannabis	¼ gr.

Eight good strong drugs in a good strong dosage ought to do something to a patient!

Again, take the "Liver — Improved" tablet:

Purified aloes.....	1 gr.
Powd. jalap	1 gr.
Powd. gamboge	1/8 gr.
Leptandrin	1/8 gr.
Mercurous chlorid, mild..	1/8 gr.
Powd. capsicum	3/16 gr.
Fl. extr. veratrum.....	1/8 gr.
Croton oil	1/50 gr.

Certainly something ought to give way before such a combination as this!

The antirheumatic tablet consists of:

Colchicin	1/100 gr.
Potassium iodid	2 gr.
Ext. phytolacca root	1 gr.
Digitalin, pure	1/100 gr.
Guaiacum	3 gr.

Bronchial:

Ammonium chlorid	1/3 gr.
Ext. glycyrrhiza	1 gr.
Oleoresin cubeb	1/6 gr.
Powd. hyoscyamus	1/4 gr.
Powd. senega	1/5 gr.
Powd. ipecac	1/50 gr.
Balsam tolu	1/5 gr.

In many cases one remedy would do the work with three distinct advantages: (1) It is cheaper and simpler and we get fresher drugs; (2) the doctor would know from experience the effect of one drug at a time on the human frame, while at present his results may come from one or a dozen and one drugs; (3) the patient's stomach would not be upset by so much drugging. I am reminded of that old newspaper advertisement with the illustration of a man open like the almanac figure, but showing a corner drug store in his epigastric territory, bearing the label: "Don't make a drug store of your stomach."

As a matter of fact, I think we do not know enough from experience about the use of simple drugs to trust ourselves to their use, except when a patient is very ill, and then we buy the freshest and purest tinctures we can get and use only what we need. The very sick patient is usually not receiving the large shotgun prescription tablet. Why is not a half-sick patient entitled to a similar consideration?

One cannot close an argument for simpler treatment without making some plea for non-medicinal treatment. Neurasthenia as well as anemia and tuberculosis should be given more fresh air and deep breathing. The big out-doors is free to everyone. Most physicians will not discuss diet with their ordinary patients. Except a man have diabetes or nephritis, he shall not learn of his doctor what to eat. Many obstetrical patients are starving themselves to produce a small baby. They need to be told that the fetus derives the necessary food from the mother's blood and the mother only starves herself.

We must not take away that panacea for all ills — Antiphlogistine — unless we teach the patient the real value of hot fomentations and flax-seed poultices.

We must not forget the tonic action of electricity and massage, cold baths and salt rubs.

We must remember "the world gives its admiration not to those who do what nobody attempts, but to those who do best what multitudes do well."

I will close with a quotation from the greatest English novelist, whose birth occurred 100 years ago this year. The thought will nerve us, if we think at all, to work. "If you wish to be happy, think of the many friends, yet unknown, who in the procession of life are now on their way to meet you."

And each patient on his way to us from out of the future has the right to demand not only our individual best work, but as well the boiled-down essence of the best opinion of the medical fraternity.

CLEARING OUR SKIRTS OF THE SUSPICION OF MEDICAL GRAFT

C. M. WILLIAMS, M.D.
Alpena, Mich.

There is a suspicion in the mind of the laity, far more than the facts warrant, that the sick are being exploited for the financial betterment of the doctor. This is particularly the case in large cities and hospitals. Rural communities also may have this mistaken idea, and in their case the suspicion does far more harm to the medical profession, because of the speed with which it travels.

The medical profession must remove this suspicion that its members are lining their pockets by secret rebates, rake-offs, commissions, split fees, discounts and the like, if they wish to retain the honor of being the noblest of professions. Each physician should see that these suspicions of medical graft have no basis in fact, and should lose no opportunity to correct any such impression that may be abroad.

Medical men are sometimes accused of accepting commissions from druggists to whom they send their prescriptions. Every physician who uses prescription blanks supplied by a druggist lays himself open to suspicion of receiving a rebate. It would be proper for the physician to furnish his own blanks, and then he would be in a better position to deny any such practice.

Likewise the suspicion that surgical cases are taken where there is the highest commission, and not where there is the highest degree of surgical skill may be corrected by the physician himself charging what his services are worth, or if the surgeon collects the fee for both, to have such an agreement with the patient as will not permit of a misunderstanding. A good rule to follow, which many physicians are adopting, is to accept no such compensation themselves, and to send their patients only to such as do not countenance this form of bribery.

These doubts as to the physician's motives are constantly increased, to the detriment of the profession, by offers from drug and liquor cure institutes to give the doctors secret rebates on all cases referred by them. Likewise some so-called maternity homes offer a percentage on the unfortunate girls that the doctor will steer into their open jaws. Some sanatoriums of the cheaper sort are not above these undignified practices, which classes them with the unlawful trusts, that by secret rebates, gentlemen's agreements, etc., have crushed down competition. Let us see to it that our patients are sent only to such institutions as give a dollar's worth of service for every dollar paid.

Politicians, public grafters, and the like have not as yet learned their proper lesson at the hands of the medical men. A few black eyes on the face of these solicitors of bribes and rake-offs would help amazingly to raise the public's appreciation of our profession.

Of all the despicable proffers ever made, that of the undertaker who offers a commission to the family physician is the most vile. Such a low-lived parasite on

the grief of the people should be publicly denounced, and his unseemly practices held up to the scorn of the world.

Every profession has its peculiar opportunities for dishonorable dealing, and I believe the medical profession to be the purest in its motives of any. Let us see to it that the public properly appreciates our position, and that we receive due credit for honorable dealing.

RAT LEPROSY

H. Zinsser and E. G. Carey, Stanford University, Cal. (*Journal A. M. A.*, March 9), report experiments on the cultivation of the bacillus of rat leprosy, possibly identical with that of man. They first employed all the usual laboratory mediums in various methods, but all without results. In the next series of experiments they followed the suggestion that the growth of the bacilli in the subcutaneous areas of the rat, where adipose tissue is normally located, might indicate a need for fats. Cultures were made on Dorsett's egg-medium to which fats in the form of butter-fat and rat-fat had been added with and without glycerin. No results were obtained. Simple symbiosis on various mediums, both aerobic and anaerobic, with the spirillum of cholera and different bacilli, gave negative results in observations covering several months. Clegg's method of cultivating the bacillus of human leprosy by implanting it on cultures of an ameba with the spirillum of cholera and the colon and typhoid bacillus were made on ameba agar with rat leprosy bacilli, but also without results. Attempt to cultivate rat leprosy by one of the methods advised by Duval for the human leprous bacilli also proved a failure. The experiments in which success was finally obtained were by means of the technic developed by Harrison, Burrows, Carrel and others for the growing of tissue-cells in coagulated plasma, using as a source of tissue small pieces of spleen from rats and over a week old. They believe that they were more successful when the animals were killed instantly by cutting the cervical cord than by ether or chloroform. The technic is described in detail. In two preparations, examined after two weeks' incubation, an unmistakable and very extensive increase of rat leprosy bacilli had taken place. The increase had occurred intracellularly, the cells being the size and arrangement other than polynuclear leukocytes. In examining the lymph-nodes of infected rats they had also observed the bacilli to be almost exclusively intracellular, which corresponds to the observations in human leprosy and indicates therefore that, as in human leprosy, the growth of the bacilli in rat leprosy takes place in the tissue-cells rather than in the intracellular spaces. The lack of cells in artificial mediums may therefore account for the numerous failures. The authors believe that we possess in the plasma tissue preparations a means of great value in studying directly certain phases of the reactions between the tissue cells and bacteria not amenable to direct experimental approach in the past.

NOTE CHANGE OF DATE OF ANNUAL MEETING
TO JULY 10 AND 11, 1912

A PEEP INTO MEDICAL ANTIQUITY*

N. H. KASSABIAN, M.D.
Coopersville, Mich.

The history of medicine, its origin, in the dim of antiquity, and its development has an intimate connection with the progress of philosophy, religion and science — in other words, civilization at large. Medicine being an art even during the embryonic stage of its existence grew parallel with its sister fine arts. Where did medicine originate? Where was its cradle? Shall we unhesitatingly and with an implicit confidence believe, as some of the ancient writers did, that Athens, the classic city of the Hellenic race, was the mother of arts, as Milton is pleased to call her? Now for a moment I wish to become an insurgent. It seems to be very much *à la mode* nowadays, and I wish to claim that Milton and the rest of his followers are very much mistaken. Milton is unquestionably an authority on Paradise Lost. He makes, however, a gross mistake when, in his great admiration of Grecian culture, he says: "O Athens, Mother of Arts." The prevailing opinion was those days that Athens was the originator and propagator of arts. Kurt Sprengel, in his "Histoire de la Médecine," says: "Greece, this favored spot of Nature, was of all others the fittest for the birthplace of medicine and other sciences and arts" (1815). But the fact is that the pick and shovel of Layard in Nineveh and recent excavations have made some marvelous revelations in regard to the origin of art in general. We have been compelled by an overwhelming majority of facts and an abundance of material to admit that in order to find the cradle of arts we need not linger round the Athenian acropolis. We ought to make a pilgrimage to the banks of the Nile and the Euphrates, because on the shores of these most ancient rivers art originated, was nursed to maturity and from there transmitted, if I may express myself in this manner, to Asia Minor and Greece. We must admit that the Greek genius gave to it an impetus, improving the art which they had learned from the Egyptians, Phœnicians and Assyrians and in due course of time imparting it to the Romans and to the world.

Men during the early period of existence, while believing a polytheistic religion, in their fancy attributed all forms of sickness, mental or bodily suffering, to the displeasure of some one of their deities and, of course, to such deities turn with petitions, prayers and sacrifices for relief. A large majority of the peopde of the Orient still believe that for fever they have to appeal to a certain saint, for safe travel to some other, for sterility to still another one with sacrificial offerings, thus proving that even after the introduction of Christianity old pagan ideas had still their sway in the minds of the people.

Among the nations of remote antiquity that attained a higher and enviable level in the cultivation of arts, Egypt stood as the one *par excellence*. Marpero, one of the most renowned Egyptologists of this century, estimates the beginning of the Egyptian civilization somewhere between six and seven thousand years before Christ.

* Read before the Kent County Medical Society, April, 1911.

In Egypt, as well as among the nations of southwestern Asia, the universal belief was that both diseases and their remedies were derived from and controlled by their deities, necessarily caused the office of priest and physician to be united in the same person, and the temples for worship became the chief places of resort for the sick. The most noted of Egyptian temples were at Thebes, Memphis and Heliopolis.

It is perhaps interesting to mention the names of four physicians who are represented as practicing medicine between 5000 to 4000 B. C. — Teta, Tsethosta, Nebsu and Chai. The first two were also kings, and the last was an oculist.

"If I wished to characterize in one word," says Schlegel, "the peculiar bearing and ruling element of the Egyptian mind — however unsatisfactory in other respects such general designation may be — I should say that the intellectual eminence of that people was in its scientific profundity — in an understanding that penetrated, or sought to penetrate, by magic, into all the depths and mysteries of Nature; even into their most hidden abyss. So thoroughly scientific was the whole learning and character of the Egyptian mind that even the architecture of this people had an astronomical import, even far more than that of the other nations of early antiquity. I have already had occasion to speak of the deep and mysterious significance of their treatment of the dead. In all the natural sciences, in mathematics, astronomy, and even in medicine, they were the masters of the Greeks; and even the profoundest thinkers among the latter, the Pythagoreans, and afterwards the great Plato himself, derived from them the first elements of their doctrines, or caught at least the first outline of the mighty speculations. Here, too, in the birth place of hieroglyphics, was the chief seat of the mysteries, and Egypt has at all times been the native country of many true, as well as many false, secrets."

Every month the Egyptians, according to Maspero, for three successive days, purged the system by means of emetics or clysters. The study of medicine with them was divided between specialists, each physician attending to one kind of illness only. Every place possessed several doctors, some for diseases of the eye, others for the head, or the teeth, or the stomach, or for internal diseases, the bone setters attached to the worship of Sakhit, who treated fractures by the intercession of the goddess, and the exorcist who professed to cure by the sole virtue of amulets and magic phrases. The professional doctor treated all kinds of maladies, but, as with us, there were specialists for certain affections who were consulted in preference to general practitioners.

The climatic character of the country necessitated the presence of a considerable number of specialists. Where ophthalmia and affections of the intestines predominated we necessarily find many oculists, as well as doctors for internal maladies. The best instructed, however, knew but little of anatomy. As with the Christian physicians of the Middle Ages, religious scruples prevented the Egyptians from cutting or dissecting in the cause of pure science the dead body which was identified with that of Osiris. The processes of embalming, which would have instructed them in anatomy, were not intrusted to doctors. The knowledge of what went on within the body was therefore but vague. Life seemed to be a little air, a breath which was conveyed by veins from member to member. Under the influence of the good breaths, the vessels were inflated and worked regularly, under that of the evil they became inflamed, were obstructed, were hardened, or gave away and the phy-

sician had to remove the obstruction, allay the inflammation, and reestablish their vigor and elasticity. At the moment of death the vital spirits withdrew with the soul, the blood deprived of air "became coagulated, the veins and arteries emptied themselves and the creature perished for want of breath."

The majority of diseases from which the ancient Egyptians suffered are those which still attack their successors: ophthalmia, affections of the stomach, abdomen and bladder, intestinal parasites, varicose veins, ulcers in the leg, the Nile pimples and finally the divine mortal malady, the *divinus morbus* of the Latins, epilepsy. Anemia, from which at least one-fourth of the present population suffers, was not less prevalent than at present, if we may judge from the number of remedies which were used against hematuria, the principal cause of it.

Egyptian physicians were able, however, to determine fairly well specific characteristics of ordinary affections and sometimes describe them in a precise and graphic fashion. "The abdomen is heavy, the pit of the stomach painful, the heart burns and palpitates violently. The clothing oppresses the sick man and he can hardly support it, nocturnal thirsts. His heart is sick as that of a man who has eaten of the sycamore gum." This is the beginning of gastric fevers so common in Egypt. A modern physician could not better diagnose such a case; the phraseology would be less flowery but the analysis of the symptoms would not differ from that given us by the ancient practitioner of remote antiquity.

The medicaments recommended comprise nearly everything which can in some way or other be swallowed, whether in solid, mucilaginous or liquid form. Vegetable remedies are reckoned by the score, from the most modest herb to the largest tree, such as sycamore, palm, acacia and cedar, of which the sawdust and shavings were supposed to possess both antiseptic and emollient properties. Among the mineral substances are to be noted sea salt, alum, niter, sulphate of copper, and a score of different kinds of stones; among the latter the memphite stone was distinguished for its virtue — if applied to the parts of the body which were lacerated or unhealthy it acted as an anesthetic and facilitated the success of surgical operations.

The medicaments compounded of these incongruous substances were often very complicated. It was thought that the healing power was increased by multiplying the curative elements; each ingredient acted on a specific region of the body. The physician made use of all the means which we employ to-day to introduce remedies into the human system, whether pills or potions, poultices or ointments, draughts or clysters. Not only did he give the prescriptions, but he made them up, thus combining the art of physician with that of a dispenser. He prescribed the ingredients, pounded them either separately or together, he macerated them in the proper way, boiled them, reduced them by heating, and filtered through linen. Fat served him as the ordinary vehicle for ointments, and pure water for potions; but he did not despise other liquids, such as wine, beer, vinegar, milk, olive oil, even the urine of men and animals; the whole sweetened with honey was taken hot night and morning. The use of more than one of these remedies became world wide. The Greeks borrowed them from the Egyptians; we have piously accepted them from the Greeks; and our contemporaries still swallow with resignation many of the abominable mixtures invented on the banks of the Nile and Euphrates in the dim of remote antiquity long before the building of the pyramids.

CHALDEAN MEDICINE

Chaldea abounded with soothsayers and necromancers no less than with astrologers; she possessed no real school of medicine, such as we find in Egypt, in which were taught rational methods of diagnosing maladies and of curing them by the use of remedies. The Chaldeans are content to confide the care of their bodies to sorcerers and exorcists who were experts in the art of casting out demons and spirits whose presence in a living being brought about those disorders to which humanity is prone. The facial expression of the patient during the crisis, the words which escaped from him in delirium, were, for these clever individuals, so many signs revealing the nature and sometimes the name of the enemy to be combated, the fear-god, the plague-god, the head-ache-god.

Consultations and medical treatment were, therefore, religious offices, in which were involved purifications, offerings and a whole ritual of mysterious words and gestures. The magician lighted a fire of herbs and sweet-smelling plants in front of his patient, and the clear flame rising from this put the specters to flight and dispelled the malign influence.

The medical authorities in Chaldea recommended such remedies which were for the most part both grotesque and disgusting in their composition. They comprised bitter and stinking wood shavings, raw meat, Soakis flesh, wine and oil, the whole reduced to a pulp or made into a sort of pill and swallowed. They attributed to these compounds wonderful effects, these strange compositions were recommended before all others, and their very strangeness reassured the patient as to their efficacy.

The Chaldeans were not, however, ignorant of the natural virtues of herbs and at times made use of them; but they were not held in very high esteem, and the physicians preferred the prescriptions which pandered to the popular craving for the supernatural.

Amulets further confirmed the effect produced by the recipes, and prevented the enemy, once cast out, from reentering the body; these amulets were made of knots of cord, pierced shells, bronze or terra cotta statuettes and placques fastened to the arms or worn around the neck. On each of the latter kind were roughly drawn the most terrible images that they could conceive, shortened incantation was scrawled on its surface, or it was covered with extraordinary characters, which, when the spirits perceived, they at once took flight and the possessor of the talisman escaped the threatened illness.

The following is a specimen of an Assyrian physician's writing to the king:

"To the King, my Lord, thy servant, Arad-Nana, Greeting most heartily to my Lord, the King. May Adar and Gala grant health of mind and body to my Lord, the King. A Hearty greeting to the Son of the King.

"With regard to the patient who has a bleeding from his nose, the Rab-Magi reports: 'Yesterday, towards evening, there was much hemorrhage.' These dressings are not scientifically applied. They are placed on the alae of the nose, oppress the breathing and come off when there is hemorrhage. Let them be placed within the nostrils and then the air will be kept away and the hemorrhage restrained. If it is agreeable to my Lord, the King, I will go to-morrow and give instructions, meantime let me hear how he does."

Another specimen of Assyrian correspondence:

"To the King my Lord, thy servant Arad Nana, may thereby place forever and ever to the King my Lord. May the God Nina and the Goddess Gula give soundness of heart and soundness of flesh to the King my Lord, Peace forever.

"To reduce the general inflammation of his forehead, I have tied a bandage upon it. His face is swollen; yesterday as formerly, I opened the wound, which had been received in the midst of it. As for the bandage which was over the swelling, matter was upon the bandage, the size of the tip of the little finger."

They have also another institution, says Herodotus, the good tendency of which claims applause. Such as are diseased among them they carry into some public square. They have no professors of medicine, but the passengers in general interrogate the sick person concerning his malady, that if any person has either been afflicted with a similar disease himself, or seen its operation on another, he may communicate the process by which his own recovery was effected, or by which in any other instance he knew the disease to be removed. No one may pass by the affected person in silence or without inquiry into the nature of his complaint.

ASSYRIAN PRESCRIPTION FOR THE DISEASE OF THE HEAD BY CAMPBELL THOMSON

"When a man's brain contains fire and myalgia afflicts the temples and smites the eyes so that his eyes are affected with dimness, cloudiness, a disturbed appearance with the veins bloodshot, shedding tears, pound one-third of a Ka of Sihla with a pestle until thou hast strained it; add one-third of a ka of Sak-ka-a-Kal thereto and knead it in an infusion of cassia, press, bind it on (as a poultice) and do not take it off for three days."

FROM THE MOST ANCIENT CODE RELATIVE TO THE PRACTICE OF MEDICINE

From the code of Khammurabi:

"If a doctor has treated a man for severe wound with a lancet of bronze and has cured the man or has opened a tumor with a bronzed lancet and has cured the man's eye he shall receive ten shekels of silver.

"If a physician has treated a free borne man for a severe wound with a lancet of bronze and has caused the man to die, or has opened a tumor of the man with a lancet of bronze and has destroyed his eye, his hands shall be cut off.

"If a doctor has treated the slave of a freed man for a severe wound with a bronzed lancet and has caused him to die he shall give back slave for slave. If he has opened his tumor with a bronzed lancet and has ruined his eye he shall pay the half of his price in money.

"If a doctor has cured the broken limb of a man or has healed his sick body the patient shall pay the doctor five shekels of silver.

"If a doctor of oxen and asses has treated an ox or an ass for a grave wound and has cured it the owner of the ox or ass shall give to the doctor as his pay one-sixth of a shekel of silver. If he has treated an ox or an ass for a severe wound and has caused its death he shall pay one-fourth of its price to the owner of the ox or ass."

There is no nation in southwestern Asia to which modern civilization and culture is as much indebted as the Israelitic race, and still so little appreciated, and more than that often submitted to disdain, ridicule and persecution. This being the case, I will take a few moments to show the impress of Hebraic civilization.

Our present mode of thought and feeling, our lives and actions are far more profoundly influenced by the world of thought and feeling which Israel created, than by that of Greece or Rome. Our whole civilization to-day is saturated and permeated with tendencies and impulses which have their origin in Judea. The reason for this is that in Israel one side of human nature had developed to very great perfection, a side which is of far greater consequence to mankind in general than art and science, law or philosophy. While in Hellas, philosophy first, and then indirectly science developed out of mythology, in Israel the age of mythology was succeeded by that of religion; and we may say that the religion of Israel is still the active religion of mankind, as maintained by Bernard Stade, in a far higher degree than the philosophy of the Greeks is still its active philosophy. What Israel did in the sphere of religion is without a doubt far more epoch-making, unique and effective than what the Romans did in the sphere of politics or the Greeks in that of art and science.

It was the strong belief of the Jews that disease and especially epidemics were sent as punishments by the deities on account of their sins. Consequently, for relief, they resorted to repentance, prayer and the

interposition of the priests officiating in their places of worship, rather than to the administration of medicines. They thereby combined the function of priest and physician in the same persons. Moses, their great law giver, gave them the earliest elementary code of public hygiene of which we have any record. It contained specific directions in regard to the kind and preparation of food; the slaughtering of animals; the burial of the dead; the regulation of marriage and sexual relations; the diagnosis and isolation of cases of leprosy and the strict prohibition of artificial abortion.

It is clear that Homer attributes such a superiority to several eastern nations, more especially to the Phœnicians, not only in wealth, but in knowledge and skill, that, compared with their progress, the arts of Greece seem to be in their infancy. The description of a Phœnician vessel which comes to a Greek island freighted with trinkets, and of the manner in which a lady of the highest rank, and her servants, handle and gaze on one of the foreign ornaments, presents the image of such commerce as Europeans carry on with the islanders of the South Sea now.

The chances of war give occasion, as might be expected, for frequent allusions to the healing art. The Greek Army contains two chiefs who have inherited consummate skill in this art from their father, Æsculapius; and Achilles has been so well instructed in it by Chiron that Patroclus, to whom he has imparted his knowledge, is able to supply their place. The operation of extracting a weapon from the wound with a knife seems not to have been considered as one which demanded peculiar skill; the science of the physician was chiefly displayed in the application of medicinal herbs, by which he stanched the blood and eased the pain. When Ulysses has been gored by a wild boar his friends first bind up the hurt and then use a charm for stopping the flow of blood. The healing art, such as it was, was frequently and successfully practiced by the women.

The fifth century B. C. was a period when Greek civilization and power had reached their zenith. Greece had victoriously closed her wars with Persia, and in statesmanship, in works of art, in history, in schools of philosophy and in physical culture she had excelled all her contemporaries. The art of writing had been introduced from Phœnicia and the use of papyrus from Egypt, thereby greatly facilitating the recording of facts and the history of events of every kind. It was at this auspicious period in human progress that Hippocrates, justly surnamed the "Father of Medical Literature" as well as the "Father of Medicine," was born on the Island of Cos, about 460 B. C. His father, Heraclides, belonged to the order of Æsclepiadæ. Hippocrates received his early education under his parents in the Temple. He went to Athens where he was educated in the best schools of Greece, and thoroughly acquainted with whatever records relating to medical topics had accumulated in the Æsclepion at Cos, which was one of the most celebrated then in existence. He commenced his professional career contemporaneous with the statesmen Themistocles, Miltiades, Pericles and Nicias; the philosophers Anaxagoras, Pythagoras, Socrates and Plato; the dramatists Æschylus, Sophocles, and Eurypides; the orators Lysias and Demosthenes; and the historians Thucydides, Herodotus and Xenophon.

Hippocrates was the first to separate himself from the order of Æsclepiadæ in which he had been born, and engaged in the work of a general practitioner of medicine. As such he visited and practiced in the provinces of Thessaly, Macedonia and

Scythia, and everywhere he studied with great care the actual phenomena of diseases and their etiology. He died in Larissa, Thessaly, in about 377 B. C. His reputation is said to have greatly increased by his successful treatment and cure of Perdicus, king of Macedonia, who was sorely afflicted with love sickness.

One of the characteristic precepts of Hippocrates is worthy of the attention of every practitioner of medicine, and I quote it as follows:

"Life is short, opportunity fleeting, judgment difficult, treatment easy, thought hard; but treatment after thought is proper and profitable."

Equally worty of remembrance are the following maxims: "The physician is a servant, not a teacher, of Nature. Follow Nature." The physician should benefit, or at least not injure; yet he declares that "timidity indicates incapacity, rashness want of skill." We might say that the three distinguishing mental qualities of Hippocrates were patient observation, logical reasoning and faithful recording of both facts and deductions.

A much more important practitioner and contributor to medical literature was Soronnes of Ephesus, who practiced in Rome during the time of Trajan and Hadrian, from 98 A. D. to 138 A. D. His works on midwifery show that practical obstetrics was at that time relatively better understood than any other branch of medicine.

Claudius Galen, the most important man Asia Minor has produced in the field of medicine, after Hippocrates, was born at Pergamus, 131 A. D. At the age of 15 he commenced the study of the prevailing systems of philosophy and of medicine, first at Pergamus and later at Corinth. At the age of 21 he went to Smyrna and visited most of the interesting places in Asia Minor and Palestine. He went to Alexandria and spent considerable time in the great library and museum, and was much interested in the study of the complete human skeleton contained in the museum.

At the age of 28 he returned to his native city, Pergamus, and engaged in the practice of medicine in connection with the gymnasium, and rapidly acquired a high reputation. Six years later he changed his residence to Rome, where he not only engaged in general practice but also in lecturing on anatomy and physiology, and by his unusual attainments and industry he soon attracted general attention. He went back to Pergamus but one year later he was induced by the emperor, Marcus Aurelius, to again visit Rome, where he became physician in ordinary to the ruler and continued there until the end of his life, about 206 A. D. He was a very industrious student and prolific writer on a wide range of subjects. His works on grammatical, mathematical, philosophical and legal subjects numbered 125. His independent works on medicine were eighty-three and his commentaries on the works of Hippocrates were fifteen. His treatises on medical subjects were called canonical because they remained the chief medical text-books through the middle ages, or more than 1,000 years.

The old statement that there is nothing new under the sun seems again to be verified in the statement that Laennec, to whom is attributed the discovery of the method of physical diagnosis, inspection, palpation, percussion and auscultation, was not the originator of these methods, but only perfected their use as an art. Cordell (*Bull. Johns Hopkins Hosp.*, December, 1909) calls attention to the fact that Aretæus, the Cappadocian, a successor to Hippocrates, a student of his works, and a contemporary of Galen in the second century of the Christian era prac-

ticed all these methods. Aretæus, as disclosed in his writings, was a very acute observer, and by inspection of his patients noted the character of the respiration, posture, decubitus, color, heat and swelling of the surface, the condition of the veins, tongue, pulse, nails, sputum, etc. He likewise resorted to palpation in enlargement of the liver and spleen, and notes the change in the position of ascitic fluid with change in posture of the patient, and by percussion noted tympanites, saying that the abdomen when tapped sounded like a drum. Hippocrates describes râles in diseases of the lungs, such as pneumonia, phthisis, empyema, etc., and they are also referred to by Cælius Aurelianus in the fifth century A. D. and by Paul of Ægina in the seventh century. The term percussion is used by Aretæus in describing the symptoms of asthma, a name which evidently embraced other conditions giving rise to dyspnea, besides that to which we limit it. Hippocrates also laid much stress on succussion sounds in empyema. It is a fact of the highest interest that Aretæus recognized heart murmurs by auscultation, and he seems the only one of the ancient writers who auscultated the heart.

Constantine was the first of the Roman emperors to embrace the Christian religion, and in 312 A. D. he proclaimed at Rome religious toleration. In 330 he moved his seat of government to Byzantium, which subsequently took the name of Constantinople. It was by decree of Emperor Constantine that the pagan institutions of Æsclepiadæ and all medical institutions under pagan control or Greco-Roman philosophy that recognized the worship of many gods were confiscated. The emperor's mother, Helena, at the same period was devoting much of her time and means to the founding of a general hospital for the sick and poor in Jerusalem. Another hospital was established at Antioch about 363 and still another noted one was organized at Cæsarea.

The Egyptians were the aristocrats of antiquity. It is true that the Greeks described all non-Hellenic nations as barbarians, but by no means did they regard all other nations as less civilized than themselves. To be sure, they did hold this attitude toward the Romans, Persians, Scythians and various other contemporary nations, but they made an exception in the case of the Egyptians. They regarded these people with something akin to reverence, as a people who could claim an antiquity of civilization to which Greece could not at all pretend.

It was gladly admitted by the Greeks that these oriental civilizations had flowered while Greek culture was yet in the bud. Solon, the law-giver, was reported to have traveled in Egypt, and to have been widely patronized by the Egyptian priests as the representative of an infant race. An Egyptian priest lectured the famous Greek in this manner: "O Solon! Solon! You Hellenes are but children." Herodotus, though ostensibly writing of the Persian War, devoted whole sections of his history to Egypt, and accepts, as did his countrymen, the Egyptian claim to immense antiquity. Plato even resided for some years in Egypt, as Diodorus tells us, in the hope of gaining an insight into the mysteries of oriental philosophy. Nothing is more explicit than the testimony of Diodorus who, writing some three centuries after what we now speak of as the Golden Age of Greece, plainly indicates that not Greece but Mesopotamia was looked to in his day as the classic land of culture, and we of to-day are enabled to catch glimpses of the data on which that estimate was based and to understand that the fabled glory of ancient Assyria was no myth but a very tangible reality.

The history of Babylonia has an interest of wider kind than that of Egypt from its more intimate connections with the general history of the human race and from the remarkable influence which its religion, its science and its civilization have had on all subsequent human progress. Its religious traditions, carried away by the Israelites, who came out from the Ur of the Chaldeas (Genesis, xi, 31) have through this wonderful people become the heritage of all mankind; while its science and civilization through the medium of the Greeks and the Romans have become the basis of modern research and advancement.

Babylonian culture was the oldest in the world, and at the same time was the mother of all other civilizations of antiquity, as has been claimed by Hammel. It is possible that even the Egyptians derived some of the elements of their culture from the Babylonians or Chaldeans.

The world historic relations of Mesopotamian art are best brought out by a study of the later and more perfectly preserved examples of Assyrian craftmanship. It was the Assyrian who borrowed more directly from the Babylonians and the Egyptians in developing his art and who passed those artistic impulses to the Persians on the one hand and the Greeks on the other. The monuments of Assyria furnish us with very important data as to the origin of many branches of art, subsequently brought to the highest perfection in Asia Minor and Greece. The indirect period of this influence is fully and completely illustrated by the monuments of Asia Minor of the time of Persian domination. The Zantian marbles acquired for England by Sir Charles Fellows and now in the British Museum are remarkable illustrations of the three-fold connection between Assyria and Persia, Persia and Asia Minor, and Asia Minor and Greece. Were those marbles properly arranged and placed in chronological order, they would afford a most useful lesson and would enable even a superficial observer to trace the gradual progress of art from its primitive rudeness to the most classic conception of the Greek sculptor. Not that he would find either style the pure Assyrian or the Greek in its greatest perfection, but he would be able to see how a closer imitation of Nature, a gradual refinement of taste, an additional study had converted the hard and rigid lines of Assyrian into the flowing draperies and classic forms of the highest order or art. This second period has been termed that of indirect influence because the arts did not then penetrate directly into Asia Minor from Assyria but were conveyed thither through the Persians. The Persians introduced into Asia Minor not only the arts but the religion as well that they received from the Assyrians. Thus, the tombs at Xantas and at Persepolis show a gradual progress in the mode of treatment, the introduction of action and sentiment and the knowledge of anatomy which mark the distinction between Asiatic and Greek art. Many architectural ornaments known to the Assyrians passed from them directly or indirectly into Greece. The Ionic column is an instance.

The three fundamental canons, "proportion, action and aspect," have been successfully met in all Assyrian art. The bas-relief of a wounded lion in the British Museum will prove this assertion. Still, though these bas-reliefs have an intrinsic worth as works of art their chief value is for what they teach regarding the evolution of art in the world. Previous to their discovery it had been supposed that the stiff formalism of the Egyptian sculpture represented the fullest flight of the pre-Grecian art and that Greek art itself had stepped suddenly forth, rather a new crea-

tion than an evolution. But, as I said previously, the pick and shovel of Layard at Nineveh dispelled that illusion, for these art treasures that had lain there under the deposits of centuries were found to represent an enormous advance on Egyptian models precisely in the direction of that realism for which Greek art is distinguished.

If we would judge how direct and unequivocal was the impulse which the dying nation transferred to the adolescent in point of art, we have but to take a few steps in the British Museum from the Assyrian rooms to the wonderful hall that holds Lord Elgin's trophies from the desecrated Parthenon. Look, then, on the frieze of the bas-relief that bears the magic name of Phidias. If anything can reconcile us to the act that deprived Greece of her precious heirlooms it is the fact that they have found lodgment here close beside their oriental prototypes, where half a million visitors each year may at least have an opportunity to learn the lesson that human progress is an accretion, a growth, a building on foundations; and, specifically, that Greek art, no less than other forms of human culture, was an evolution, and not an isolated miracle.

Consequently we cannot fully realize all of the Egypto-Asiatic influences on European civilization and progress until we imagine this work taken away and view the vacuum that would be left. Science would become bold and ragged; history would lose its charm and fascination; medicine would be barren and uninteresting; some of the brightest jewels would drop from the crown of literature, and the fairest garments would be shed from the shoulders of art.

Some of these southwestern Asiatic races, namely, the Chaldeans, Assyrians, Babylonians, Phœnicians, Hebrews and Egyptians (our neighbors on the border land) had an organized civilization long before Socrates taught philosophy or before Herodotus wrote history. These antique races had literature before most nations had letters, and art while other nations knew only war and savagery. Draper quotes Cabanis as saying specifically of the Jews, that "they were our factors and bankers before we knew how to read."

With these facts in view I have come to the conclusion that the influence of Hellenic civilization, of which I am an ardent admirer, on European culture at large has been overestimated. While in the meantime the influences exerted on Greek arts and sciences by Egypto-Asiatic civilization has a tendency in certain quarters of either being underestimated or being overlooked entirely. My main object has been to make an effort to replace the honor and credit of the forces which contributed to the development of modern culture, medicine being only an element, where it appropriately belongs.

X-RAY IN PREGNANCY

Angus McLean and P. M. Hickey, Detroit (*Journal A. M. A.*, March 16), report the successful use of the *x*-ray in a patient in whom the differentiation between pregnancy and large fibromyoma failed by other methods. They refer to a previous paper (JOURNAL M. S. M. S., January, 1912), by Dr. Hickey suggesting this method, and the case illustrates its value. It illustrates the case with which the diagnosis can be made and the elimination of uncertainty in many cases in which the thickness of the abdominal walls and the obesity of the patient cause failure of the ordinary methods. Two *x*-ray exposures, each of four seconds, were employed, the rays being directed laterally through the large pendulous abdomen. The case was well-advanced pregnancy, and a normal child was born within a little over a month.

AUTO-INTOXICATION*

BENJAMIN A. SHEPARD, M.D.
Kalamazoo, Mich.

It is the purpose of this paper to consider some factors regarding bacterial activity in the intestinal canal and the clinical importance of such study.

ETIOLOGY

From a bacteriologic viewpoint the intestinal tract must be considered as a very perfect incubator and culture medium combined; not that any one spot contains all the necessary features for all bacteria, but the diversity of reaction and foodstuffs found in the various sections afford a very suitable place for the development of all bacteria capable of growth at body temperature.

Not only is bacterial growth a possibility but a reality and it has been considered by some as being, if not a necessity, at least not abnormal. Opportunity for observation and study of the upper intestinal flora of man is difficult to obtain, and observers have had to depend on early autopsies and fecal fistulas. What I may give in that line is gleaned from those who have been able to make several such observations and from my own limited observation. According to Herter the bacteria in the small intestine of the normal nursling are usually the short Gram-negative bacilli of the colon and *lactis aerogenes* forms; in the lower ileum the bifidus bacteria appear; and in the cecum and first part of the colon it becomes very numerous and nearly if not quite replaces the colon bacillus. By the time the rectum is reached this type appears in almost pure culture. Thus we see that the variety in the infant which is breast-fed is very limited and the varieties present are of the obligate variety while in the bottle-fed infants the variety is greater, especially when the milk is not sterilized or pasteurized. The products of decomposition in the intestine of the normal infant are very small, there being only a trace of indol if any at all. As age advances there is a transition of the intestinal conditions and the more varied diet is accompanied by an increased number of bacterial varieties. Various investigators have found from forty to fifty different forms of bacteria in the intestinal contents, but for the present practical purposes we may divide them into two great classes, viz., proteolytic and fermentative. To a greater or less extent these two divisions are facultative, so to speak; the proteolytic may produce gas while the fermentative may become weakly putrefactive. However, with a protein diet we have an excess of Gram-positive bacteria capable of producing putrefactive products such as indol, acetic acid and hydrogen sulphid, while if we change to the carbohydrate diet the Gram-positive and negative become about equal in amounts, the proteolytic products are greatly reduced or are entirely absent, and indican and aromatic oxyacids of the urine which may be regarded as indicators of more or less value, become diminished in amount or absent.

The *Bacillus bifidus,* while present, is not so numerous. Occasionally we meet with cases which have retained the bacte-

* Read before the Michigan State Medical Society, at Detroit, Sept. 27-28, 1911.

rial conditions of childhood until well advanced in life, but the diversity of diet and conditions have in the large percentage of cases caused changes in the bacterial processes. The constant tendency is the invasion of what we may term foreign bacteria and it is here that the colon and other bacteria render their greatest aid by inhibiting the growth of more harmful germs; but in most adults they are more or less unsuccessful and there takes place in the intestine the formation of substances which are more or less toxic to the economy. Herter in a series of experiments on monkeys, after a considerable period of feeding exclusively on hard-boiled eggs, found that in these animals the proteolytic bacteria become dominant in the alimentary canal. The animals developed a state of drowsiness, remained on their perch, grew stupid, responded poorly to outside stimuli, and showed but little interest in their surroundings. As he added carbohydrates to their diet both the psychical and physical attitude of the animals underwent a marked change — the posture became erect and their usual brightness and alertness returned. Herter believes the symptoms observed on the protein diet were signs of intoxication brought about through excessive use of protein and its putrefaction. We must remember that digestion, whether normally so or not, is a double process, an enzymic and microbic one. Both enzymes and microbes transform starch into sugar, emulsify fats, and transform proteids into peptones — but the work of the microorganisms does not stop here, for if unchecked they bring about further cleavage, and putrefactive changes take place with the products previously referred to.

Under normal conditions little or no putrefaction occurs in the small intestine. It is ordinarily the foods or secretions rich in proteids which undergo putrefaction, and here I would emphasize that the secretions may undergo putrefaction and that we may have it taking place during complete fasting. The *Bacillus aerogenes capsulatus,* or gas bacillus, is the most important of the anaerobes which cause fermentation and putrefaction in the large intestine, because of the frequency of its occurrence and its intensity in those processes. Herter in one instance found evidence of its wandering as high as the middle of the small intestine in a dog. In human beings with anaerobic infection the colon bacilli are greatly diminished or absent in the feces, from which we would conclude that they were diminished in the small intestine. In saccharobutyric putrefaction there is an excessive production of butyric acid on an ordinary mixed diet. Of the nitrogen products of putrefaction there are several known but little understood — ammonia, the amins, diamins, cholin, neurin, sulphur compounds and the aromatic bodies. The organism is prepared to take care of a moderate amount of ammonia which as we know unites in the liver with carbon dioxid and forms urea, but it is possible that it also unites with other substances and forms irritants.

Of the sulphur compounds hydrogen sulphid is the most important, but we are little informed on the effect when it is produced in the intestine, though there have been cases reported of poisoning by this gas. The symptoms have been of a nature pointing to a disturbance of the central nervous system, such as vertigo, headache, delirium, mental depression, stupor and possibly collapse.

Phenol and cresol seem to be unimportant from a toxic standpoint in the amounts produced. Skatol like indol is derived from tryptophan, and there are reasons to believe that it resembles indol in its power of damaging the tissues — though in a lesser degree. Indol does not

result from tryptic digestion, though it is one of the products of proteid cleavage, but is a resultant of bacterial action on proteids which have been brought to the tryptophan stage of digestion, where it forms a favorable pabulum and is probably attacked by a form of the colon bacilli. Indol is absorbed and perhaps some of it burned in the system, but it is mostly eliminated and large amounts are found in the urine of persons in whose intestine the proteids are being rendered into indol. This is perhaps the principal toxin ordinarily formed in the intestine, though it will be described clinically with the rest since it acts largely with other products of putrefaction.

Against the poisonous materials the normal organism protects itself through the action of the intestinal epithelium and the liver which destroys most of the toxins while the excretory organs eliminate the remainder. Under certain conditions, however, we may find these products generated in excess of the powers of the economy to dispose of them, or those powers may fail in efficiency, the former condition being the more frequent. This may be due to various disturbances in the normal course of digestion, errors in diet, qualitative or quantitative, or the cause may lie in the organism itself as, for example: gastric atony with or without dilatation plays an important part, or the gastric secretions may become defective. Intestinal atony plays a very frequent and deleterious part, the more serious the higher up in the intestine the stasis occurs — and once stasis takes place we are in sight of anto-intoxication with all its consequent evils. The symptoms will be found to vary according to the intensity of the conditions and the susceptibility of the individual, some people being very susceptible to the poisonous effects of decomposition products.

DIAGNOSIS

There may be more or less continued diarrhea (or it may be intermittent), there may be simply a large amount of fermentation with a large production of intestinal gas, or, what is more common, constipation, and it is to be remembered that because a patient has a daily evacuation it does not mean that the material has not remained in the intestine an abnormally long time and hence the importance of testing the motility of the intestine. There may be found an apparent diarrhea and constipation coexisting. Such conditions cannot long persist without causing various disturbances such as coated tongue, bad taste, bad breath, headache, a drowsy condition during the day and a restless sleep at night, abnormal perspiration, various nervous and mental depressions, neuralgias and myalgias, often irritation of the kidney and even the bladder with their consequent results. Herter has by the administration of indol produced in man frontal and occipital headache, colic, lassitude and insomnia, and after the continued administration a tendency toward neurasthenia. Prominent otologists and ophthalmologists have emphasized the importance of auto-intoxication in the etiology of certain otic and optic conditions. This has been very forcibly brought out recently in a case of auto-intoxication which I referred to a competent oculist without giving him the clinical findings, and which he sent back to me with his opinion that the ocular findings indicated that the patient was suffering or had recently suffered from auto-intoxication and that if it continued the results to the eyes would be serious.

Putrefaction may be divided into two classes: (1) that which is the result of bacterial cleavage replacing to a large extent the tryptic digestion, which is caused by excessive growths of members

of the colon bacillus group which ascend high in the small intestine and as a result of which tryptophan is changed by the putrefactive process and indol and other members of the group formed; (2) the saccharobutyric form of putrefaction takes place in the lower ileum and in the colon where the aerogenic conditions are right. These organisms attack proteids and carbohydrates and form butyric acid and other products such as proprionic acid, caprionic acid, etc., which give to the stools the characteristic odor; the stools have an acid reaction and may be very light in color and have a low specific gravity. In this form may sometimes be found the formation of ammonium butyrate which may irritate the bowel causing diarrhea. Patients suffering from anaerobic infection bear carbohydrate diet and acids badly. They suffer from flatulence. Anemia is found in nearly every case varying from the moderate secondary anemia to the more severe or pernicious anemia. (I would mention here that there is a wide variation in the susceptibility of individuals to the toxins and their manifestations of symptoms, the subjective symptoms varying from a slight headache or vertigo to epileptic convulsions.)

TREATMENT

In the treatment of these cases the greatest care is needed and we must have the intelligent cooperation of the patient. It is my rule to have the teeth examined by a thorough and competent dentist who understands the importance and significance of mouth infections. Local infections here must be one of the first things to be excluded. Gastric functions should be thoroughly examined and carefully watched. Cooked foods should be used as much as possible, and yet we cannot depend on sterilization in this way entirely, as the means of eliminating bacteria, as the anaerobic bacilli causing trouble lower down are spore-forming germs. Thorough mastication, the addition of dilute hydrochloric acid if indicated and attention to the motor functions are important factors in the treatment. Medicines which have been of service are the salicylates, formin, guaiacol and others. The growth of lactic acid bacteria in the intestine has proved of value in my work. Laxatives and cathartics are often followed by a temporary amelioration of the symptoms. Colonic irrigation I believe to be of great value.

The prognosis can only be given after a thorough study of the case. The tendency is for the early development of senile changes even in mild cases that persist for any great length of time. In a large percentage of cases with intelligent cooperation of the patient we may expect good results.

The Journal of the Michigan State Medical Society

Published under direction of the Council.

All communications relative to exchanges, books for review, manuscripts, advertising and subscriptions should be addressed to Wilfrid Haughey, A.M., M.D., Editor, 24 West Main Street, Battle Creek, Mich.
The Society does not hold itself responsible for opinions expressed in original papers, discussions or communications.

Subscription Price $2.00 per Year, in Advance.

JUNE

EDITORIAL

THE RADIUM CONTENT OF DIORADIN

While it is probable that radium with its marvelous emanations will be found to possess distinct and well-defined therapeutic properties, for the present at least its chief value appears to reside in the magic of its name. For this reason exploiters of "radium preparations" are as a rule silent as to the amount of radium contained in their preparations. This is, to the exploiter, a safe and satisfactory procedure, for almost all natural products, even rain water, have been found to be radio-active. Appreciating apparently that physicians are inclined to be unfavorably impressed with "formulas" that give no clew as to the quantities of the claimed constituents, some promoters of radium preparations now make a statement regarding the radium content of their specialty. Thus the manufacturers of Dioradin declare on the label the radium content of their products as follows: "One C. T. M. cube contains . . . one-tenth of a drop of a solution of radium of 5 millions unity Mache."

While manufacturers should be able to make accurate determinations of the radio-activity of their preparations and place on the market products of a stated radio-activity, an examination, made in Holland, of a specimen shows that the claims of the manufacturers of Dioradin are not always to be relied on.

E. H. Büchner, privat-docent of the science of radio-activity at the University of Amsterdam reports (*Pharmaceutisch Weekblad,* March 2, 1912, p. 161) an examination of Dioradin of which the following is an abstract:

"The contents of a Dioradin ampule was mixed with 10 c.c. of alcohol in a glass cylinder and sealed with a stopper containing a glass tube passing to the bottom of the vessel. The emanation was obtained from the fluid by passing through it a current of air, to the electroscope. The emanation thus obtained was compared with that of a solution containing a known quantity of radium bromid. The Dioradin emanation caused an action represented by 20 lines on the scale per hour. The general rule is that a solution of 1.1×10^{-11} gm. radium corresponds to 10 lines per hour, and consequently the Dioradin solution represents 2.2×10^{-11} gm. radium or 3.8×10^{-11} gm. radium bromid. A better idea of these findings can be obtained by comparing the price of the radium salt involved. Assuming that 1 gm. of pure

radium bromid costs 250 francs ($50) then the amount in the Dioradin ampule is worth 0.001 centime (0.0002 cent). Expressing the values in Mache units, as is more customary in medical application, the amount of emanation corresponds to about 0.1 Mache. This calculation is not exactly correct as great confusion still prevails in the science of radio-activity, and the statement that 1 liter of water represents 100 Maches requires further explanation to make it exact. It may not be superfluous to state that the radio-active waters of the General Radium Society are used in doses of 1,000 Maches per day, and that sometimes injections of the same amount are prescribed.

Assuming 1 drop of the radium solution used by the manufacturers of Dioradin to contain 0.0000038 gm. radium, one ampule should contain 0.00000038 gm. radium. Büchner's results indicate the presence of only 0.000000000022 gm. radium, and hence the Dioradin ampule contained less than one-one thousandth of the claimed radium content.

While examination of one specimen made in Holland is no proof that all specimens of Dioradin contain but a small fraction of the radium which they are said to contain, it proves at least that the manufacturer's claim should be viewed with suspicion. Physicians who are asked to use this preparation should refuse to do so until it has been approved by the Council on Pharmacy and Chemistry.

LEPROSY IN MICHIGAN

During the past month the public press has reported the presence of a case of leprosy in Bay City. Some months ago a case was reported in the Northern Peninsula. Leprosy has been known since the earliest times. It is spoken of indirectly in several parts of the early books of the Bible. Later it became quite prevalent. During the middle ages it was quite extensively prevalent in Continental Europe, England and Scotland, but declined in the fifteenth century, practically disappearing a century later. In the last hundred years it has again assumed considerable prominence.

In 1879 Hansen discovered the germ of leprosy but attempts since then to grow the germ outside of the human body have been failures. It is true that Rost of the British Army Medical Corps claims the successful cultivation of the leprosy bacillus in salt-free bouillon, but his work has not been confirmed.

Attempts to transmit the disease by direct inoculation of leprous tissue have been unsuccessful. It is generally admitted that leprosy is not infectious or is very slightly so. The incubation period has been estimated at any place from a few months to forty years. It has been claimed by a number of observers that leprosy must be transmitted through an intermediate host, similar to malaria and yellow fever, but this has not been proved. It is known that the contagion is slight, probably requiring prolonged personal contact.

Leprosy has always been looked on with horror, as witness the habit of the Jews, segregating the lepers and compelling them to call out "unclean" when meeting any one. The treatment is becoming more and more humane. Ages ago lepers were banished from the sight of man, practically, forced to live in caves and absolutely segregated from healthy people. Now they are put on reservations where they have all modern conveniences and are given the best of care. They are often allowed to live with their families in isolated places, the other members of the family not, as a rule, contracting the disease.

The Bay City case recently reported is that of a Russian Jew, 50 years of age, a rag pedler who in the ordinary course of business was sent by his Bay City physician to Dr. Andrew P. Biddle of Detroit in consultation, where, though the disease was recognized clinically, he was not told the nature of the disease, pending confirmation of the diagnosis by laboratory findings. He evidently mistrusted something for in a day or two he left Bay City for parts unknown, but was finally located at Centerville, Iowa. He will probably be brought back to Bay City and placed on a farm where his wife may stay with him. He has the nodular form of leprosy and has had the trouble about eight months. From the tissue sent to the State Board of Health at Lansing the diagnosis was microscopically confirmed. Later the diagnosis was further confirmed at the pathologic laboratory of the University of Michigan by Professor Warthin.

THE COUNCIL ON PHARMACY AND CHEMISTRY

Last month, under the above caption, we published a list of the journals which followed the Council on Pharmacy and Chemistry in advertising. We inadvertently left out of this list the *Pennsylvania Medical Journal,* the official organ of the Medical Society of the State of Pennsylvania, which has been following the Council for a considerable time. We are glad to make this correction and would be pleased to place in this list any other journal which we may have omitted.*

ETHICS

VI. SECRET DIVISION OF FEES

For some time past there has been much discussion through the medical journals and in the medical societies of the evil of fee-splitting. The Michigan State Medical Society, at its last meeting, appointed a committee to study this subject. The Erie County (New York) Medical Society, some time ago, through a special committee appointed for that purpose, presented an elaborate report on fee-splitting. The Wayne County Medical Society has recently appointed a similar committee to report in October.

There seems to be much difference of opinion on this subject. Many surgeons and specialists are splitting fees as a matter of self protection. They are compelled to do so to make a living. One surgeon in Michigan has remarked recently that for years he declined to split fees but it became absolutely necessary for him to do so in order to get enough business to live, because of the fact that other men did split fees and the work which formerly came to him was being referred to the other men, even though in many instances they were less competent.

Those in favor of fee-splitting argue that the attending physician is entitled to a reasonable compensation for making the diagnosis and referring the patient to the proper specialist or surgeon. Others say that the remuneration of the surgeon or specialist is out of all proportion as compared to the remuneration of the general practitioner, and that in paying the fee charged by the surgeon the patient has nothing left to pay the general practitioner; therefore it is just and proper that the man who takes all the money the patient has should divide with the man who referred the case to him.

Other advocates of fee-splitting say that this is the only way they can get anything at all for their services to certain of their patients. Advocates of this practice have become so numerous that recently a county society in Iowa passed resolutions favor-

* May 24.—The Journal of the Kansas Medical Society for May, just received, contains no advertising not approved by the Council on Pharmacy and Chemistry and announces that advertisements of drugs not approved by the Council will not be accepted.

ing the practice under condition that a fixed percentage be always paid for referred cases.[1]

There are also arguments opposing the practice of fee-splitting. Dr. A. S. Draper, State Commissioner of Education of New York, in a recent report says: "It is certainly reprehensible because it develops the motive for deception and overreaching, and it changes the relation of the parties from a personal and professional into a commercial one." He also says: "Collusion between surgeons and physicians is shown by the 'split-fee' system which makes patients the victims of practitioners and surgeons and which presents both divisions of the profession as conspirators in the overmulcting of patients who are alike deceived and robbed." [2]

"The practice cannot be too strongly denounced and it should be penalized the same as rebating by the transportation companies has been, and the ones to be penalized should be the givers of the rebate. The consultant, whatever be his line of work, who tries to increase his practice by offering to split fees with the physician who sends him cases, is beneath contempt. The practice is contrary to the traditions and ideals of American medicine and it must and will be stamped out." [3]

It would seem that this practice of fee-splitting is prohibited by the law of the state of Michigan; Act. No. 161, Public Acts of 1905, referring to the power of the Board of Registration in Medicine to revoke or refuse to issue certificates of registration, says: " . . . The Board may . . . revoke the certificate of registration after due notice and hearing of any registered practitioner . . . who shall . . . pay or present money or other valuable gifts for bringing patients to him." [4] Act 210, 1905, says: " . . . An agent, employee or servant who, being authorized . . . to employ service or labor for his principal, employer or master, receives directly or indirectly . . . a commission, discount or bonus . . . from a person who renders such service or labor; and any person who gives or offers such an agent, employee or servant such commission, discount or bonus, shall be deemed guilty of a felony, etc." [4]

The New York County Lawyers' Association in January, 1912, adopted a code of ethics in which appears the following: "He (the lawyer) should not accept any costs or compensation for services rendered in his client's matters without his client's knowledge; and he should not, without his client's knowledge and consent, accept any portion of the fees charged by other attorneys or individuals or corporations employed by him in his client's business." [5]

The practice of fee-splitting seems to permeate the whole country. It has become so noticeable that lay magazines are commenting on it.[6] The practice is even deeper than fee-splitting. Patients are grafted on all along the line. Some drug stores pay physicians a regular commission on all the prescription work sent them. Some orthopedic appliance houses pay a commission, some maternity houses, habitué sanatoriums, etc., have fallen into the split-fee habit, and last but not least we have recently heard of an undertaker who had been solicited for a $5 "rake-off" for all cases turned over to him, and this solicitation came not from one lone doctor, but from seven.

1. Jour. Iowa State Med. Soc., February, 1912.
2. Brooklyn Daily Eagle, Jan. 30, 1912.
3. Le Fevre, Egbert: New York State Jour. Med., March, 1912, p. 113.
4. Public Acts of 1905, Michigan.
5. Long Island Med. Jour., January, 1912, p. 14.
6. Dosch, Arno: The Farce of Medical Ethics, Pearson's Magazine, September, 1911. Reed, C. A. L.: The Farce of Medical Ethics, Pearson's Magazine, April, 1912.

It is high time that the medical profession either convinced the people that these forms of graft are legitimate, or cleared themselves of the suspicion, which we wish we might believe only rarely just.

COUNCIL ON HEALTH AND PUBLIC INSTRUCTION

The Council on Health and Public Instruction of the American Medical Association was appointed at the St. Louis meeting. Since that time it has been perfecting its organization and unifying the work delegated to it. The work of the Council is and should be among the most important of the Association. During the past year public lectures have been held in every state in the Union by men from adjoining states eminently competent to talk to the public on matters in which they are interested. Several of these lectures have been given in Michigan by such men as C. A. L. Reed of Cincinnati, M. P. Ravenel of Madison, J. N. Hurty of Indianapolis and N. P. Colwell of Chicago. The Council plans, in the near future, to issue a lyceum bureau outline list of the various lecturers available and the subjects on which they will speak.

The Council is also sending each week to about 3,000 newspapers in the United States a proof-sheet of editorial comments, abstracts of scientific papers and other items of general information to the public. Matter from this press bureau is being largely copied by the press throughout the country, sometimes being used as news items but frequently being used as editorial matter.

The Council has issued a series of medical cartoons which have appeared from time to time in *The Journal of the American Medical Association.* These cartoons were republished in the American Medical Association *Bulletin* just issued, together with the statement that they are available for use on application to the Secretary, 535 Dearborn Avenue, Chicago.

The Council on Health and Public Instruction has in charge the progressive legislation for which the medical profession stands, and is endeavoring to secure the passage at Washington of a bill providing for a department of health. The bill which now meets the requirement best of any is the Owen bill of which all possibly objectionable features have been removed.

Recently one of the senators from Washington read to the Senate a list of telegrams from constituents of his opposing this bill. He stated that the only information he had from his constituents was in opposition to the bill and he must represent his constituents. It would be well to let our senators and representatives know the feeling of the profession in regard to this public health legislation, that they might not have the same excuse for voting against this bill.

IN MEMORIAM

Dr. A. W. Martin, University of Michigan, 1900; a member of the Montcalm County and Michigan State Medical Societies, died at his home in Howard City, April 5.

Dr. Wm. W. Root, University of Michigan, 1862, died at his home in Mason, April 23, age 75.

Dr. C. E. Spencer, Bellevue Hospital Medical College, New York, 1873; member of the St. Clair County and Michigan State Medical societies, died at his home in Port Huron, May 5, of apoplexy, age 63.

Dr. Talbert Sleneau, University of Michigan, 1883; member of the St. Clair County and Michigan State medical societies, died at his home in Port Huron, April 21.

MUSKEGON, MICHIGAN — INFORMATION CONCERNING MUSKEGON AND THE MEETING OF THE MICHIGAN STATE MEDICAL SOCIETY

OFFICIAL CALL

The 47th annual meeting of the Michigan State Medical Society will be held on Wednesday and Thursday, July 10 and 11, at Muskegon. The 4th annual meeting of the County Secretaries Association will be held on Tuesday, July 9, at 2 p. m., at the Occidental Hotel, Muskegon. The Council will meet in the evening of July 9.

D. EMMETT WELSH, President,
WILFRID HAUGHEY, Secretary.

MEETING PLACES AND EXHIBITS

It is planned to hold all of the sessions of the Michigan State Medical Society meeting beneath one roof. The beautiful roomy well lighted Hackley school building has been obtained. There is a large auditorium on the top floor with a stage where general sessions may be held. The higher grade school rooms on the upper floors are well adapted for the section meetings. The large main hall on the ground floor is excellent for the commercial exhibits. This should attract a large number of exhibitors as the entrances to the building are at this hall and all members in attendance at the general meeting and sections will pass through the exhibit hall going and coming. All those contemplating making an exhibit at any State Medical Society meeting this year will do well to consider this and bring their exhibit to the meeting of the Michigan State Medical Society at Muskegon. Dr. J. T. Cramer of Muskegon

Occidental Hotel—Headquarters.

LOCAL ENTERTAINMENT

The local committee on entertainment to be provided outside of the regular program for the meeting of the Michigan State Medical Society at Muskegon July 10 and 11 is doing active work and there will be plenty of entertainment provided for visiting members and their wives and guests. Automobiles will be provided in abundance for drives about the city and surrounding country and lake shores. Several social affairs are being planned.

has charge of the matter of space for exhibits and should be communicated with by exhibitors.

The following have already engaged space for exhibits at the meeting of the Michigan State Medical Society to be held at Muskegon, July 10 and 11. Numerous inquiries are being received daily and early action should be taken if there are others who desire to make an exhibit as the available space is limited.

J. F. Hartz Company, Detroit, Mich. (Physicians' Supplies).

Postum Cereal Company, Battle Creek, Mich. (Postum).

Mellins Food Company, Boston, Mass. (Mellins Food).

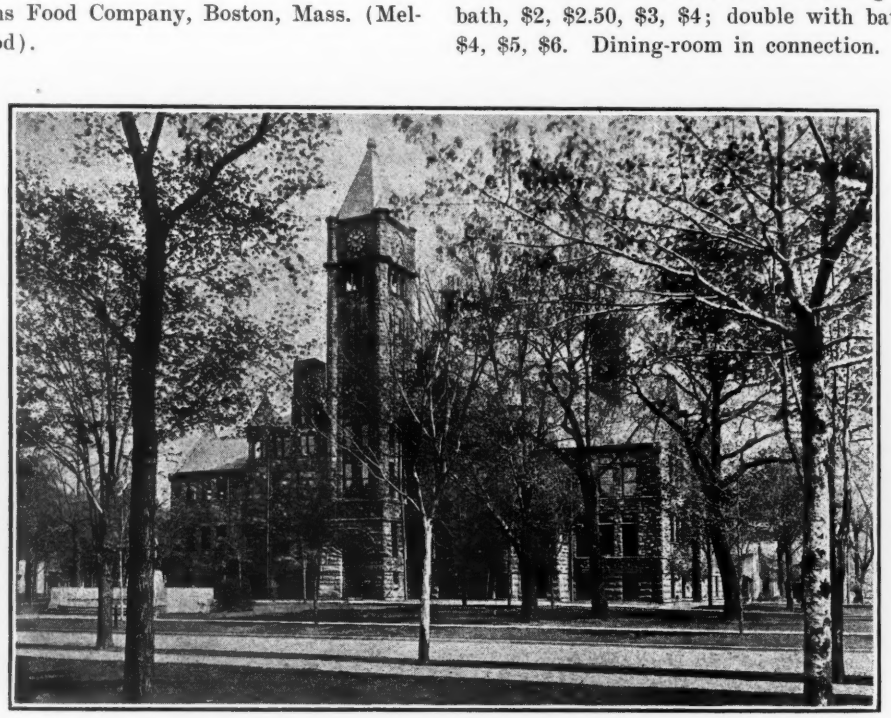
G. D. Searle & Co., Chicago, Ill. (Mfg. Chemists).

Horlick's Malted Milk Co., Racine, Wis. (Malted Milk).

HOTELS AND ACCOMMODATIONS

Visitors who will be in Muskegon to attend the annual meeting of the Michigan State Medical Society will find ample accommodations for board and lodging at the following places recommended by the local committee of Muskegon.

Occidental Hotel, European plan (Headquarters): Single without bath, $1, $1.50, $2; double without bath, $2, $2.50, $3; single with bath, $2, $2.50, $3, $4; double with bath, $3, $4, $5, $6. Dining-room in connection.



High School—Meeting place and exhibits.

Maltine Company, Brooklyn, N. Y. (Malt Extract).

G. S. Sherman, M.D., Detroit, Mich. (Bacterial Vaccines).

Bordens Condensed Milk Company, New York (Condensed Milk).

Welch Grape Juice Company, Westfield, N. Y. (Grape Juice).

DeVilbiss Mfg. Co., Toledo, Ohio (Instruments).

Chas. H. Phillips Chem. Co., New York (Milk of Magnesin) (Phopho Muriate of Quinine).

Reed & Carnrick, Jersey City, N. J. (Drugs).

American Case & Register Co., Salem, Ohio (Acc't Registers and Systems).

Lake Harbor Hotel is operated under the same management as the Occidental Hotel and is strictly on the American plan and the rates are figured accordingly. Rooms without bath, $4 per day; rooms with bath, $5 per day. This rate of course includes both room and board.

Park Hotel, European plan, rooms 75c to $1.

Hotel Hammerschmidt, European plan, rates 50c to $1.

Those rooming at any of the hotels with the European plan may conveniently obtain meals at the following restaurants within a door or so of the Hotel.

Silver Moon, European plan, 239 W. Western Ave., good meal may be had from 25c to $1.

Brebner's Cafe, European plan (Elks Temple), a very excellent meal is served rates varying from 25c to $1.

These places recommended by the committee are all, with exception of Lake Harbor Hotel, located from within two to four blocks walk of the Hackley school building, where the general and section meetings will be held.

Besides these there are a number of private boarding houses in the downtown portion of the city near to general meeting place. There are a large number of smaller summer hotels on the shores of Muskegon Lake, Lake Harbor, and Bear Lake, where excellent accommodations may be obtained at very reasonable rates. At any one of these summer hotels excellent boating and fishing may be obtained. Families could spend a week or two, preceding or following the State Society meeting, at these hotels very pleasantly.

The committee on hotels will have a full list of accommodations with rates and will be glad to assist all visitors to obtain suitable location. Or, such arrangements may be made previously by addressing communication to the chairman of the committee, Dr. A. A. Smith, Muskegon, Michigan.

AUTOMOBILING AND GARAGES

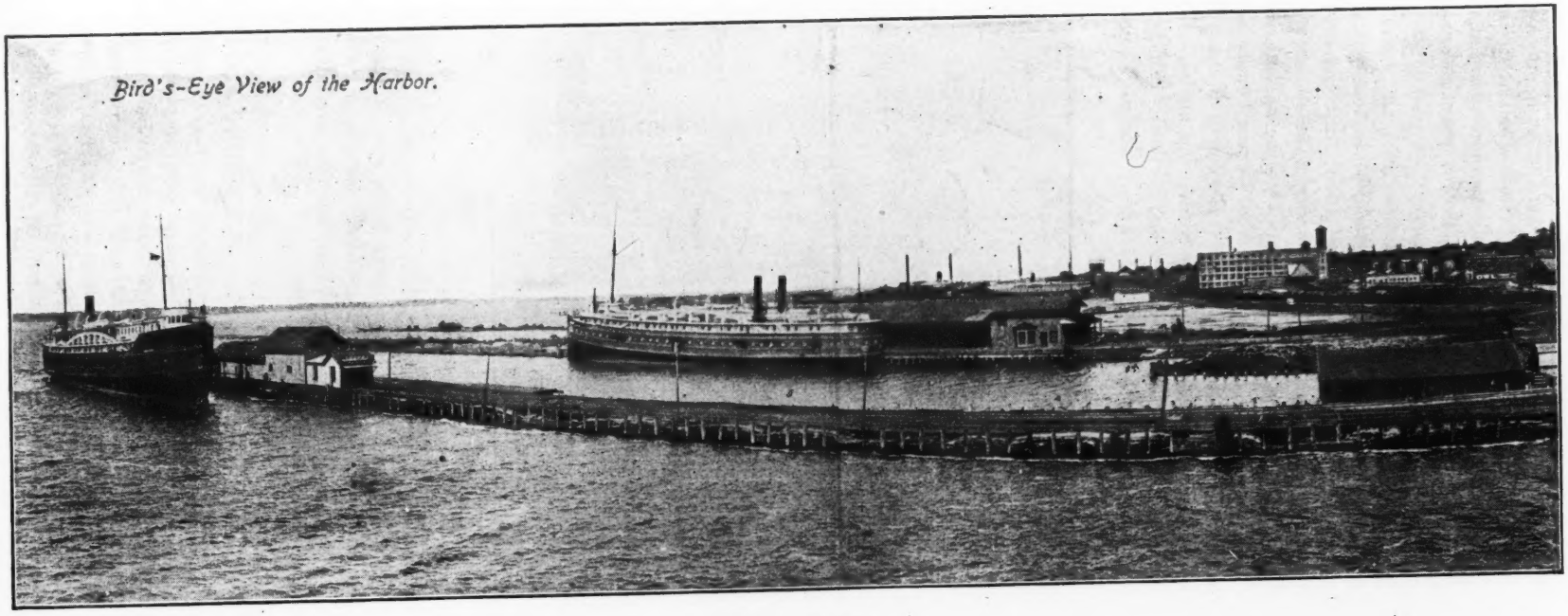
Muskegon is well supplied with efficient garages for caring for automobiles. No hold-up tactics are employed in these garages. Physicians of the state who can come to the Michigan State Medical Society meeting by automobile should do so. The roads about Muskegon and Oceana counties are splendid for automobiling.

The country is beautiful. The territory around about Muskegon contains some of the finest small fruit and berry farms to be found anywhere. These are worth seeing. The territory of northern Muskegon County and the whole of Oceana County adjoining on the north contains some of the very finest fruit farms in the world. An automobile trip from Muskegon through northern Muskegon County and on into and across Oceana County is a pleasure not lightly to be passed by. Western Michigan is bound to be one of the most important fruit producing sections of the world. Muskegon and Oceana counties are in the lead in making this true.

Masonic Temple.

SOMETHING ABOUT MUSKEGON

Twenty-five years ago Muskegon was one of the great lumber marts of the world. Many are living now, who could tell how, back in the days of old, when the hum of the saw was heard everywhere, Muskegon for its size was the biggest little city in the country. These same old pioneers will now wag their heads wisely and say: "Ah, them was the days."



Muskegon Harbor.

While it is true that in those days Muskegon was a busy town, it is also true that the place had only one principal line of manufacture, namely: sawmills. There were no wide, attractive, paved thoroughfares, no large handsome business blocks of any consequence, or electric light plants. There were but few improvements of any nature and yet Muskegon progressed in those days like a green bay tree.

As year by year rolled by and the great sawmill industry commenced to dwindle, keen, shrewd men of business realized that to make Muskegon keep up a stride of improvements many radical reforms and changes were necessary. If the sawmill industry were going to die, most important was it, that manufacturers in other lines of business must be secured. These same enterprising citizens commenced to use their influence and capital, and slowly but surely, with the passing away of the sawmill other manufactories located here. The list became diversified, each year saw some new product put on the market that emanated from a Muskegon factory, and thus it comes to pass, good old Muskegon better established and more prosperous than ever, larger in population and with brighter prospects, is 'midst one of the most successful business years in the history of the town.

In libraries, hospitals and other structures Muskegon has a list of handsome edifices any town many times larger might be proud of.

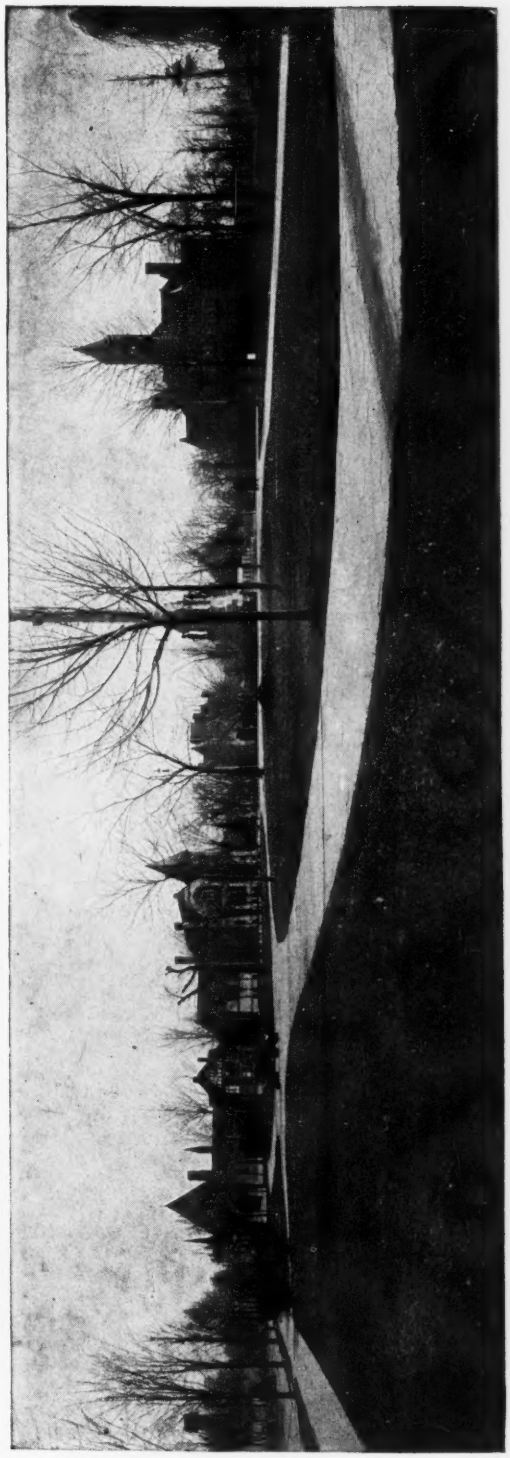
Our neighbor, Grand Rapids, while wallowing in despondency on the subject of impure water (a subject that for years has been discussed in the city on the raging Grand) Muskegon with its unlimited supply, boldly offers to the outside world, as one of its features, pure water—a blessing to any community.

The sewerage system of Muskegon is another feature and to it each year are added miles of new drainage.

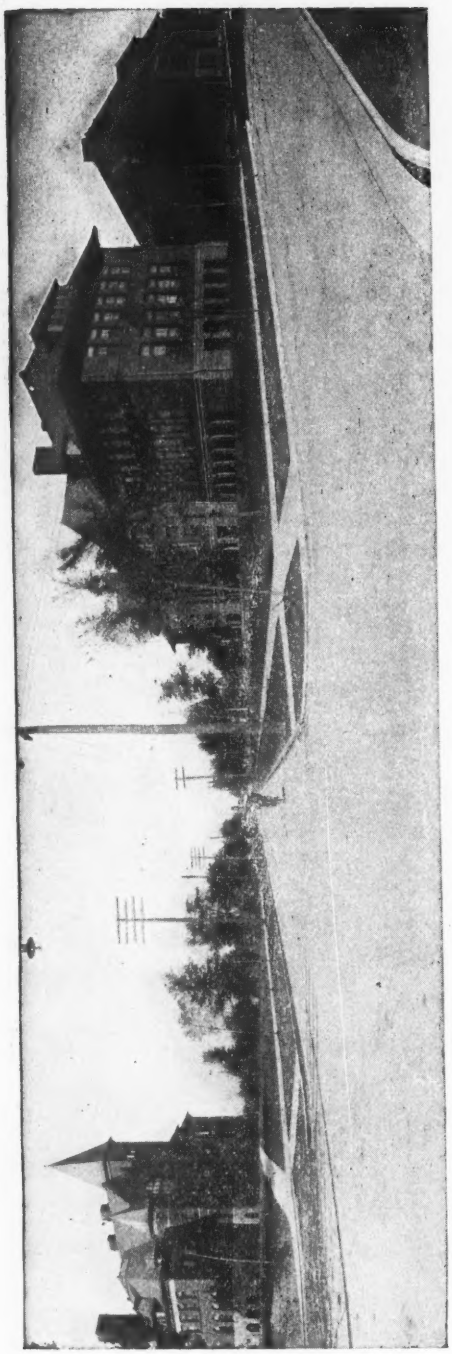
Over 70 miles of paved streets are in the corporate limits and more being added annually.

In banks the town is fortunate. Four of the strongest kind of banking institutions are conducting a conservative, successful business. In point of factories Muskegon is particularly fortunate. Some of the largest plants in the state are located here and the aggregate output is something astonishing.

Another important item that adds greatly in making Muskegon successful is the number of large handsome stores that grace the retail districts. To the credit of this burg it can be said



Panorama of Hackley Park.



Panorama of High School, Hackley Manual Training School, and Gymnasium.

that some of the most attractive salesrooms in Western Michigan are to be found right here in our midst.

Muskegon has the facilities and the capital to bring innumerable enterprises here and with the enterprising residents the town has, she is sure to boom.

An old home comer that has been away for a quarter of a century, will find a vastly different Muskegon to-day as compared to what it was 25 years ago.

As the town stands to-day it has a population of about 27,000 people—an energetic, frugal and far seeing community—a class of people that are boosters, not knockers, and that are always looking after the interests of their home town. There is no better harbor on the lakes, than that on which Muskegon is located. It is safe, and, landlocked as it is, can give shelter to the largest fleet of deep water ships.

Two of the greatest blessings in any city are systems of churches and schools. What a great blessing it is to any city that has a splendid system of schools and stately edifices of worship for every creed and religion. Muskegon is indeed blessed in these respects. Her churches and schools are unsurpassed.

PUBLIC SCHOOL SYSTEM

The public schools consist of eleven graded school buildings, each occupying a block square, having play grounds, kindergarten, and one of the newest features, school gardening; high school; Hackley Manual Training School; boys' and girls' gymnasium with a swimming pool; city normal training school, and Hackley Public Library and Art Annex.

Medical Inspection.—The Superintendent and the School Board of the public schools of the city of Muskegon were among the earliest to take up the work of Medical Inspection in the schools and have carried the work to a higher standard than most schools that have adopted it.

Many cities have a school nurse who does the entire work; with, sometimes, the assistance of the city physician or health officer. Some cities provide for medical inspection of schools by a single physician. Medical inspection in Muskegon's schools is carried on through a medical advisory board consisting of three regular practicing physicians of the city; two general practitioners (one male and one female) and one oculist and aurist. A school nurse, devoting her entire time to the work, assisted

Huckley Manual Training School and Gymnasium.

by the attendance officer of the schools: and a corps of dental surgeons. The city physician and health officer cooperates with all of these.

The school board confers with the medical advisory board on all medical and sanitary matters pertaining to the school work. The members of the medical advisory board, besides making inspections of the schools and recommendations to the school board in medical and sanitary matters, carry out a systematic physical examination of all the students in the public schools. In the high school and gymnasium the physical examinations are very thorough and no student is permitted to enter outdoor athletics or participate in the work of the gymnasium or swimming pool without first receiving the physical examination. In this work the examining physicians are assisted by the physical director for the boys and the physical director for the girls, respectively, of the gymnasium.

A systematic examination of the eyes, ears, nose, throat and teeth is given to every student in the grades.

Complete records are kept in all instances. Whenever a student is found physically defective or afflicted with any disease, the parent receives a written notice thereof and the child is from that time until the trouble is corrected, under the supervision of the school nurse. Students with communicable disease are, of course, excluded from the schools until they may return with safety to all concerned.

In a special room in the Hackley School building, well adapted for the purpose, the school board has installed a complete and thoroughly up to date equipment of furniture, instruments, supplies, etc., for dental work for school children who otherwise would not receive such care. Here every Monday forenoon may be found some one of the members of the Society of Dental Surgeons of Muskegon who with the school nurse as assistant devote that half day to charity work for the school children.

Hackley Public Art Gallery.

At the beginning of the medical inspection work in Muskegon's public schools there was some tendency to objection by the parents to the work with regard to their children. This has almost entirely disappeared. Parents now are anxious to have their children receive the benefit of the medical inspection and examination work and accept the warning cards and visits of the school nurse in a spirit of hearty cooperation. All of this has been made possible by judicious tactfulness and by the full cooperation of the superintendent and the school board of the public schools of the city of Muskegon.

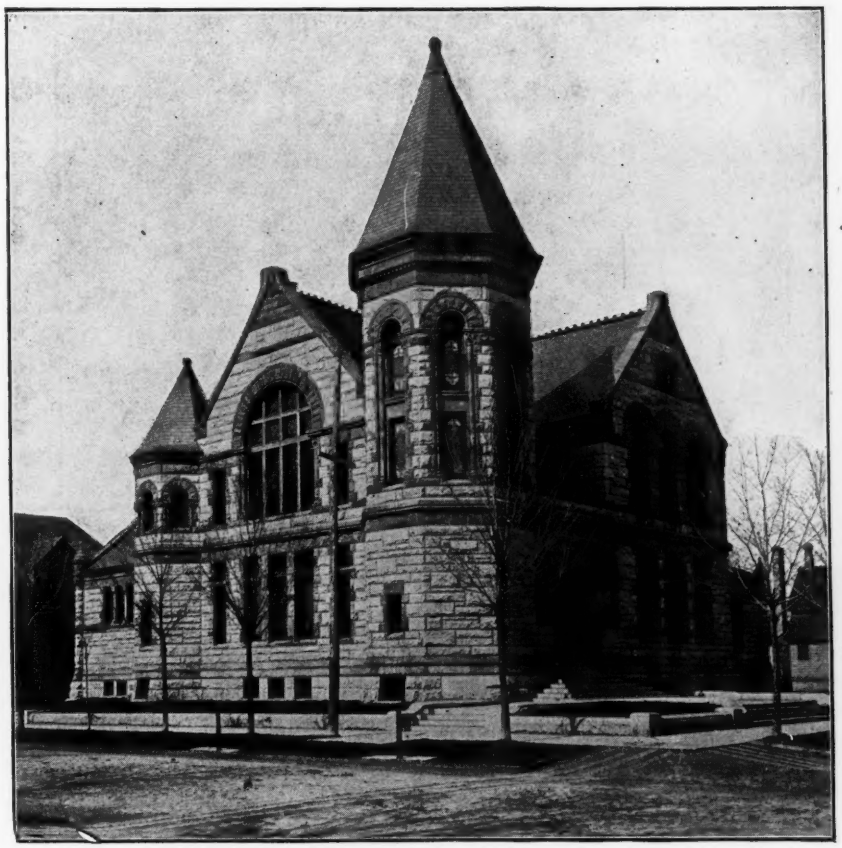
THE HACKLEY MANUAL TRAINING SCHOOL

On account of the liberality of Mr. Chas. H. Hackley, than whom before his death, there was no resident more beloved, Muskegon to-day enjoys the distinction of having one of the largest, best equipped and most complete manual training schools in the United States.

The Hackley Manual Training School is situated in the southeastern part of Muskegon on Jefferson street, between Washington and Grand avenues. On the west side of the street, going south, is the high school, with a building frontage of 124 feet, and directly opposite, on a terraced block, is the Hackley Manual Training School, with a building frontage of 254 feet, the grounds of each building occupying an entire block.

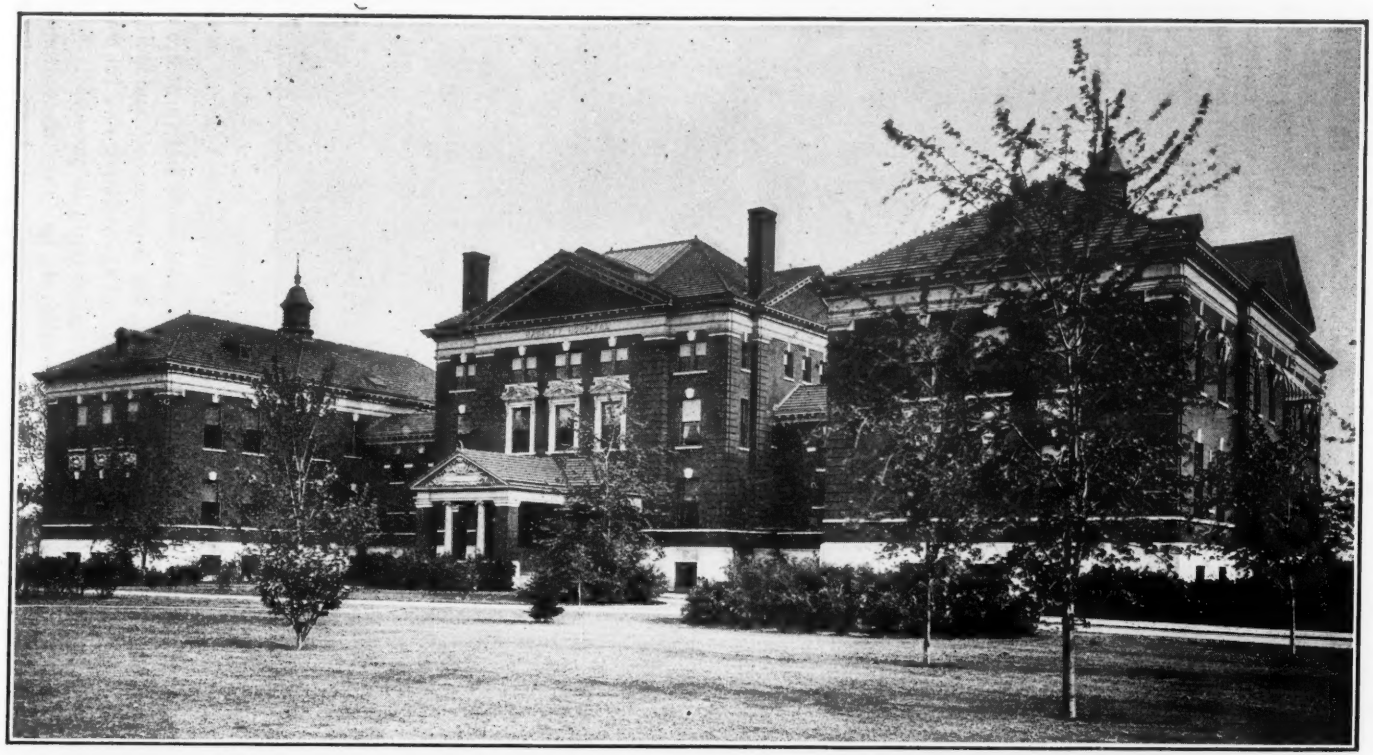
The Hackley Manual Training School is a four story building of dark red brick with terra cotta trimmings; dormer windows break the long roof lines, and numerous other deep-set windows give the building a particularly pleasing appearance. It is a solid, massive building, beautiful in its simplicity and architecturally perfect, suggesting in its appearance the substantial character of the work to which it is dedicated.

Entrance to the building is through a beautiful arched doorway; wide staircases lead to the upper stories, and corridors afford access to all parts of the building.



Hackley Public Library.

The wood work and furniture are in natural finish, the floors smooth and solid, in fact, every detail of the building and its equipment is the best that could be procured. It is heated and ventilated by the most improved modern method, using both direct and indirect radiation, and the Johnson and Paul systems of regulation. The windows throughout the building are provided with Chamberlain metal weather strips.



Hackley Hospital.

In the north wing there has recently been installed at an expense of $3,000, an Otis automatic, push-button, electric elevator. The great building contains many rooms, each furnished with all the necessary requisites. There are offices, reception parlors, lavatories, lockers on each floor, a beautiful auditorium, a lunch room, and work rooms of all descriptions.

The first floor is reserved for the heavier manual labor, such as forging, machine work, and molding, together with pattern making, wood turning and applied art.

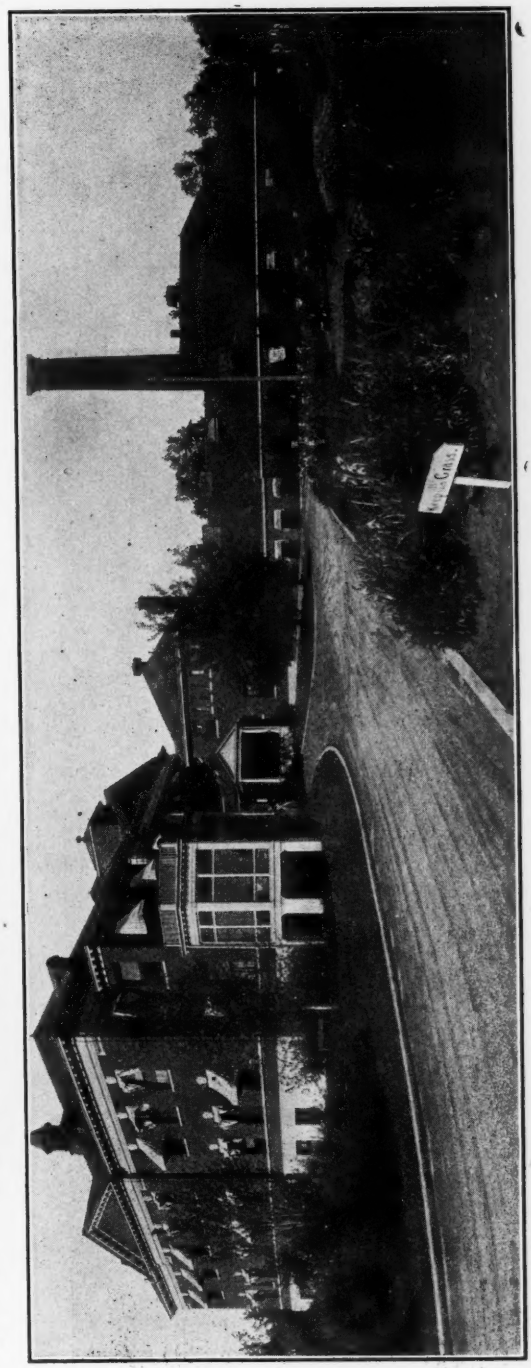
The pattern shop is located in the southeast wing and is equipped with eighteen 4x10-inch W. R. and R. wood lathes, one large lathe, a 36-inch band saw, jig saw, two trimmers and a full equipment of tools for individual and general use in pattern making. Around the walls are eighteen benches with drawers and racks for tools.

The mill room adjoins the pattern shop and is equipped with a universal cut-off and rip circular saw, a 36-inch planer, 12-inch buzz planer, surfacer and a grindstone. In this room all material is prepared for the various shops, only the older pupils being allowed to use the machinery. Power for the two rooms is supplied by a ten horse-power electric motor.

Adjoining the mill room is a fire-proof paint room where all the paints, oil, varnishes, etc., are kept.

The forge and the machine shops, adjoining each other, are located in the central part of the building. The forge shop is equipped with twenty Sturtevant down draft forges, a bar shear for cutting stock, a two hundred pound steam hammer, a post drill, an emery grinder, and the necessary anvils, vises, benches, swing and hand hammers, fullers, swages, punches, chisels, tongs, and similar tools used in ordinary forging. The blast is supplied by a 24-inch blower, and the exhaust drawn by a 60-inch steel fan. Power for these is supplied by a ten horse-power electric motor in the power room.

The machine shop is fully equipped with a great variety of hand and machine tools. There are engine lathes, a planer, a drill press, a shaper, a milling machine, wet grinders, benches and vises for hand work, and drawers for individual tools. The tool room connected with this is fully supplied with all necessary measuring, marking and testing tools, taps and dies, drills, files, etc.



West side view of Hackley Hospital, showing ambulance entrance and service building.

The hospital grounds are spacious and park-like.

The foundry is located in a one story and basement wing in the rear of the forge room and machine shop. It is equipped with a two-ton cupola, a brass furnace, core oven, and moulders' benches and the necessary riddles, rammers, slicks, shovels, trowels, etc. The blast for the cupola is furnished by an 18-inch cupola fan, driven by a five horse-power motor in the power plant.

In the foundry is also located a large 18x18x 33-inch special Revelation Kiln for the firing of pieces of pottery and the experimental work with glazes undertaken in connection with the drawing and applied art work of the third and fifth years.

The power plant in the rear of the machine shop contains the switchboards, motors, blower and exhaust fans for the foundry and the forge shops, engines, heating and ventilating systems and two one hundred and fifty horse-power boilers with automatic stokers. It furnishes hot water to all parts of the main building and for the shower baths and natatorium in the gymnasium.

In the north wing are two large well lighted rooms, one of which is used for storage of lumber and the other is completely equipped for working in sheet metal, leather, pottery and clay modeling. The room contains eighteen metal working benches with the necessary vises, gas connections for burners or blowpipe, and a complete set of individual tools, many of which have been made by the students in the forge and in the machine shops. Around the room are special benches, a hand forge, vats for acid baths and etching various metals, and anvils for heavy work.

Second Floor—To the left of the main entrance on the second floor is the office and reception room of the director, the library, a lecture room and two mechanical drawing rooms, which are each fully equipped with drawing boards, instruments and supplies for carrying on this work. Directly in front of the main entrance are two large rooms, with lavatory and locker rooms attached, one of which is equipped with twenty-five W. R. R. lathes, driven by a ten horse-power motor, and the necessary tools and benches for carrying on elementary wood turning. The other room is fitted up for the work in electricity. This department is equipped with benches, vises, tools, etc., for the laying out and the construction of apparatus, with a complete telephone system, including a switchboard, with apparatus for

measuring resistance, voltage and amperage, and with machines for winding coils. To the right of the main entrance is the exhibit room, a lavatory and locker room, and two wood working rooms. Both of the latter rooms are equipped with Tole's benches and rapid acting vises, with a complete outfit of individual and general tools, cases for the work, closets, blackboards and lecture benches. One of these rooms accommodates twenty-five pupils, and is used mostly by seventh grade classes of the ward schools, which come once a week for manual instruction; the other room is equipped for twenty-four pupils, and contains, besides the suite and a tiled bath and toilet room; a teachers' rest room and office; a millinery room with a seating capacity of twenty-four, and provided with cases, tables, models, etc.; a sewing room with accommodations for twenty-four, equipped with large drafting and small sewing tables, sewing machines, stock closets and project cases; a fitting room and a dressmaking room with complete equipment.

In the south wing are two cooking laboratories, a laundry, a dining-room, a pantry, and a lecture and exhibit room. The larger of the two cooking laboratories is equipped for twenty-four, and the smaller for sixteen pupils. They

Nurses' Home and Annex.

equipment above mentioned, a band-saw, a grindstone, a three horse-power motor and general tools for advanced work. These rooms are also being gradually equipped with the necessary tools for working in sheet copper and brass, in order that the students may combine wood with light metal working.

Third Floor.—Opposite the main stairway on the third floor is a handsome auditorium, with a seating capacity of over 700. The remainder of the floor is devoted to the Domestic Science and the Domestic Art departments. In the north wing is a recitation room, a bed-room furnished with a beautiful mahogany bedroom are both furnished with a view to individual work, each having large gas and coal ranges, charts, individual and general utensils, scales, microscopes, and in fact, every convenience.

The pantry and dining-room adjoining the small kitchen offer every facility for the serving of meals, etc., and are furnished with all the necessary silver, china, glass and linen.

The store room connects the large kitchen and the laundry, and contains a refrigerator, barrels, crocks, etc., for the preservation of food supplies.

The laundry is equipped with porcelain tubs, a dryer, a flat-iron stove and attachments, iron-

ing tables, etc., and furnishes every opportunity for good work. The lockers for students are arranged along both sides of the hallway and in the lavatory rooms.

Fourth Floor—The fourth floor contains the various studies of the Art Department, rooms for clay modeling and wood carving, as well as a lunch room, where hot cocoa is served during the winter season to those bringing lunches.

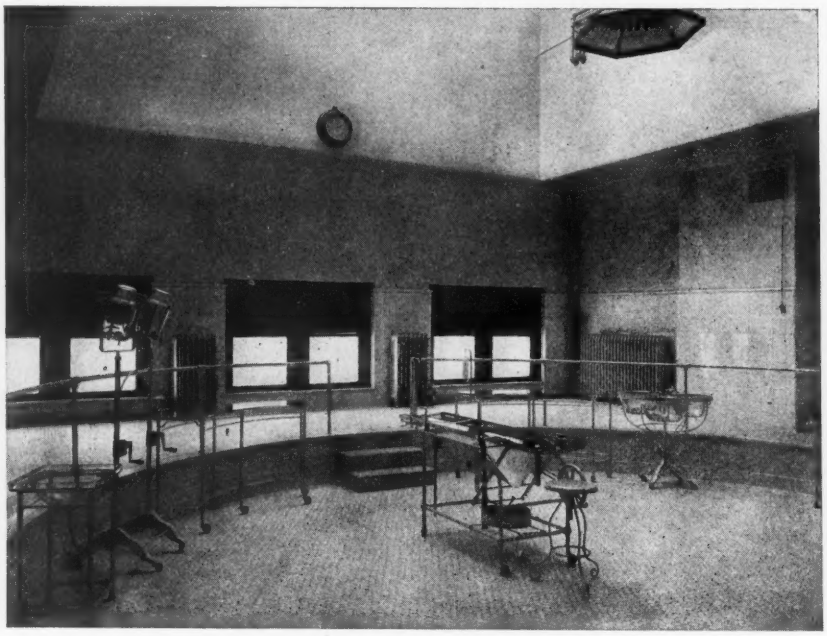
HACKLEY ART GALLERY

One of the most attractive buildings in Muskegon, which would do great credit to a city many times larger, is the Hackley Art Gallery. The building is a beautiful creation of classic architecture, located on Webster Avenue next to the Hackley Library. It is simple in design yet very dignified. One of the main features is the imposing entrance hall, with a wide double staircase of marble which leads to the main floor, containing five large exhibition galleries, reference rooms, and business offices. On the ground floor and extending nearly the whole length and breadth of the building is an auditorium capable of holding six or seven hundred people.

A number of very fine paintings have already been acquired among which are examples by artists of international importance, such as Joseph Israels, George Inness, Ranger, Tanner, Blommers, Dwight Tryon and Kever. The permanent collection will be added to from time to time, until Muskegon possesses one of the most important collections of art in this country. Our standard of art is the highest and any picture whether presented for sale or as a gift must reach this standard before it can hope to attain a permanent home in the Hackley Art Gallery.

HACKLEY HOSPITAL

Historical Sketch—The City of Muskegon is distinguished by the fact that in a single generation it developed from a small lumbering town to a flourishing manufacturing city of 25,000 inhabitants, with institutions and advantages not enjoyed by many much larger places. This distinction is due largely to the loyalty, wisdom and generosity of one of its citizens, the late Charles H. Hackley, who, after making a fortune here in lumbering, devoted the last sixteen years of his life to the remaking of the city. He interested himself in the many new business enterprises that came in as lumbering went out; and was closely identified with the industrial development of the city. But he was even more concerned with the evolution of the city's higher life. During these last years of his life he provided the people with a beautiful li-



Operating-Room—Hackley Hospital.

brary, housing 40,000 volumes, endowed with $75,000, a park adorned with statues of great Americans, a manual training school that is one of the most complete of its kind in the country, endowed with $400,000; and finally, this hospital costing $236,804 and endowed with $100,000. Thus while he was still able to see and direct the expenditure of his money he gave to the city of his love no less than $1,400,000.

In his will and in the supplementary will of his wife, Julia E. Hackley, the library, the manual training school, the city poor, the orphanage known as the Home of the Friendless, several of the churches, and Hackley Hospital, were provided for with endowments aggregating $1,460,000, and in addition to this, the public schools of the city were made the residuary legatee of one-eighth of the estate, which will amount to approximately $1,500,000. Thus the city will eventually receive from Mr. Hackley's interest in its welfare not far from $4,500,000. Most of this money is to be held in trust as permanent endowment funds for the institutions founded by Mr. Hackley.

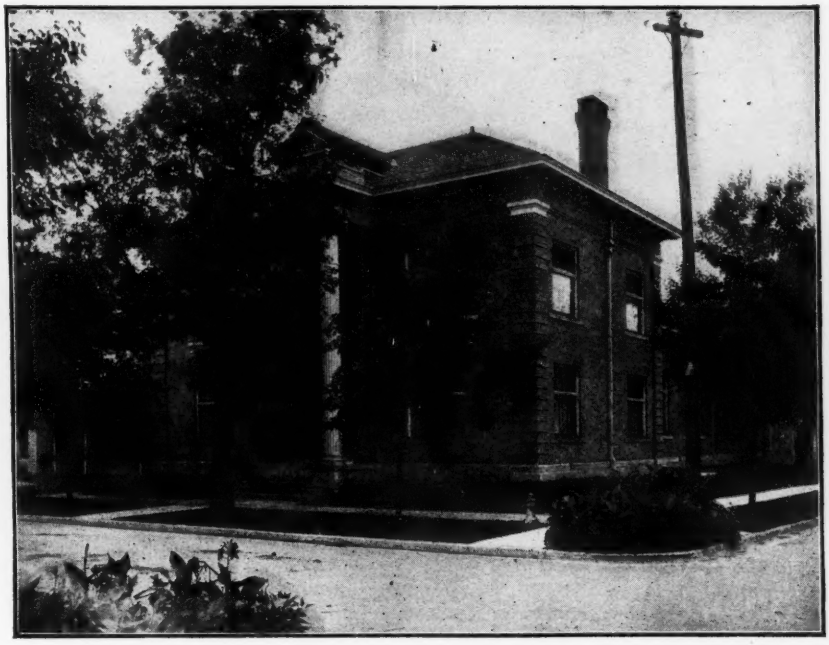
Of these institutions the last to be given was the hospital. He gave it, selected its site, was a member of the board of trustees that arranged the plans and saw it built, and on the day of its dedication and opening was one of the happiest spectators. The hospital stands thus as one of the many monuments of Muskegon's greatest benefactor.

The gift was first announced May 28, 1902. By the terms of the gift the hospital is placed under the guardianship of the First Congregational Church of Muskegon, which chooses its trustees.

Mr. Hackley died February 10, 1905. In his will he provided $200,000 additional endowment for the hospital. Aug. 21, 1905, Mrs. Hackley also died, and in the will with which she supplemented his gifts $300,000 more was added to the hospital's endowment fund.

On the day the hospital was dedicated an additional gift of $5,000 was made by Horatio N. Hovey, of Detroit, to constitute the Elias W. Merrill free bed fund for the benefit of the teachers of the public schools of the City of Muskegon and the employees of the Hackley Public Library.

Thus the hospital's total endowment is $605,000.



Woman's Club.

The Building and Its Appointments—For an institution of its size, with a capacity of sixty beds, Hackley Hospital is believed to be as complete, scientific and modern in its plans and equipment as any yet built.

It is situated in the southeastern part of the city, one block east of Peck street, between Forest and Larch avenues and Clinton and John

streets, the site occupying four city blocks. The grounds, which have a growth of native oaks, have been improved, and are provided with paved walks and drives and trees, shrubbery and flowering plants, making the environment of the hospital ideal in its quietness and beauty.

The hospital is built on the pavilion plan, with a central administration building, facing the north, while connected with this by spacious corridors are the east and west pavilions, devoted to the wards and rooms for patients. To the rear of the administration building is the service building, with kitchen, laundry, power, lighting and heating plant. These four buildings are really one single building, constructed of the best materials and practically fire proof. The extreme length from east to west across the front is 204 feet, while from the front of the building to the south end of the service building is 250 feet.

The exterior walls are of red pressed brick, with foundations and stone trimmings of Bedford limestone. The roof is of red tile, and the windows are of plate glass.

The first floor of the administration building has a large well-lighted lobby in the center, on the walls of which are memorial tablets. Opening off from this lobby are the trustees' room, the superintendent's office, the reception room, the microscopic examination room, the doctor's room and the drug room. To the rear is the emergency operating or ambulance reception room. The second floor of the administration building contains the living rooms for the administrative officers.

The Operating Room—On the third floor is the main operating room, also the septic operating room, surgeon's room, etherizing room, recovery room, nurses' room, *x*-ray and static machine room, sterilizing room, etc. The arrangement of these rooms is very convenient. The main operating room has an overhead northern light, believed to be as nearly perfect as can be secured.

Ursuline Academy.

The first floor of the west pavilion is arranged in rooms for private patients, while the second floor contains the maternity ward and the children's ward.

The first floor of the east pavilion contains the men's medical ward at the north, and the surgical ward at the south end. Between the two are the pantry, a dining room for convalescing patients, an isolation room for a patient critically ill or unmanageable, toilet rooms and the nurses' service room. The second floor of this pavilion is similarly arranged and is designed for the use of women.

A Model Kitchen—The service department is reached from the administration building through the basement corridor. Here are the dining rooms for the help, the refrigerator room, diet kitchen and bakery. The kitchen, which occupies the full width and height of the service building at that point, is admirably lighted and ventilated. It has the best equipment of a modern institution kitchen.

The laundry is fitted with the finest machinery for such a department—washing machine, separator, clothes dryer, mangle, and ironing tables. Back of the laundry is the sterilizing room.

tion for furnishing the principal part of the heat, and fans for ventilation. A large ventilating fan in the basement drives the warm air into every room in the building, while four attic fans draw the impure air away. The system is supplied with automatic heat regulation. The ventilating capacity is sufficient to give each patient fresh air at the rate of thirty cubic feet per minute. The air supply can be regulated according to the number of patients.

The hospital is furnished with everything to make the patients comfortable and for the best medical and surgical work. The operating department is supplied with every agency and im-

Children's Home.

There is an isolation department for contagious diseases, two wards for two patients each, with nurses' rooms, service and toilet rooms. This department is completely separated from the rest of the hospital.

A complete hydrotherapeutic department is located in the basement of the west pavilion. A large automatic electric elevator runs from the basement to the operating room of the administration building.

Heating and Ventilating—The power plant is equipped with two 100 horsepower boilers 14 feet by 66 inches, and two 30 K. W. direct-connected units for furnishing power and operating the electric lights. The heating and ventilating system is a combination of direct radia-

plement for successful surgery. The static machine is said to be the largest built, and the *x*-ray outfit is complete in every way. Mr. Hackley was most generous in providing the trustees with everything to make the hospital complete, his constant aim being to get the best.

NURSES' TRAINING SCHOOL

Four years ago the training school was reorganized. The non-payment system was changed, and the nurses in training are now furnished with the uniform of the school during the first year, but no other remuneration. Through the second year they are paid $10 monthly and in the third year $20 per month. Several other changes which were introduced at that time

have worked well, and to-day the twelve graduates of the Training School bear the title of Registered Nurse. Many of the number are holding positions of responsibility and trust.

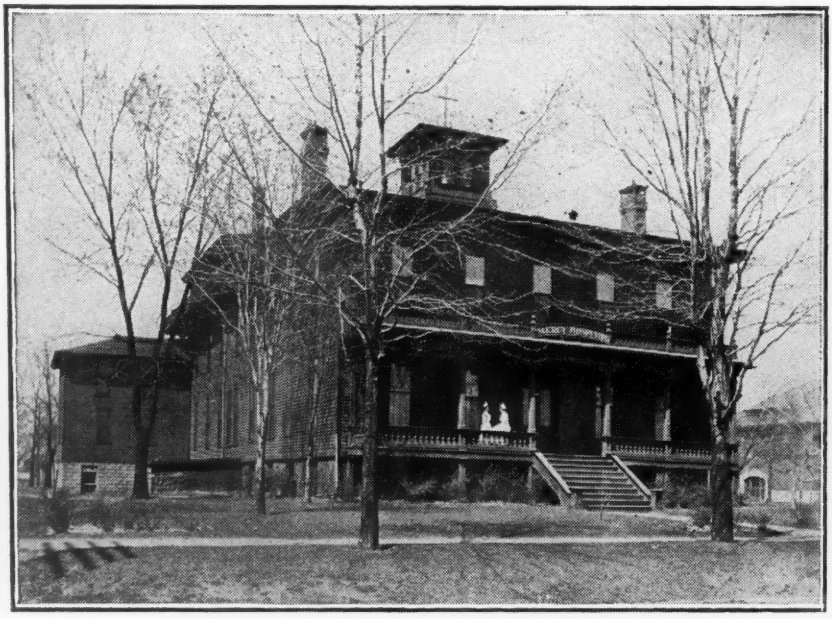
The health of the nurses has been excellent, in the past year, with only one serious illness in the school to report—a mild case of typhoid fever. The time lost by all illness in the school through the year averages six days for each nurse.

A thorough and satisfactory course of dietetics is given the nurses at the Hackley Manual Training School through the courtesy of the Board of Education of the city of Muskegon.

The object of the association is to benefit and assist those unable to obtain skilled assistance in time of illness, and to teach proper care of the sick.

The nurse is a regular employee of Hackley hospital and resides at the hospital, where she is on call for service in the homes of all who need her help, except where contagion exists, charitable cases receiving first attention.

The compensation for the services rendered by the visiting nurse depends on the family's or patient's ability to pay. Her services are given freely when needed, a small fee may be paid by those who do not wish to receive char-



Mercy Hospital.

With this exception the course of training is conducted entirely by classes, lectures, practical demonstrations and bedside clinics at the hospital.

VISITING NURSE ASSOCIATION

An important feature of the service rendered by Hackley hospital to the people of Muskegon is represented in the Visiting Nurse, who devotes all her time to work outside the hospital. To cooperate with the trustees of the hospital in directing the labors of the visiting nurse there has been organized in the city the Visiting Nurse Association, composed of representative women appointed from various organizations.

ity; and regular nurses' wages are expected from well-to-do families.

The association possesses eleven wheel chairs that are in constant use, and meets expenses for infants' outfits, adult clothing and bedding, household supplies, drugs, sputum cups, and surgical dressings for needy sick.

MERCY HOSPITAL

Mercy Hospital of Muskegon is under the management of the Sisters of Mercy, whose Mother house is at Big Rapids, Mich. This institution is a part of the system of hospitals conducted by the Sisters and includes hospitals at Big Rapids, Manistee, Grand Rapids, Bay City, Cadillac and Grayling.

The location, corner of Grand avenue and Jefferson street, is a very desirable one, the ground being high, the air fresh and breezy and sufficiently distant from the noise and smoke of the downtown district.

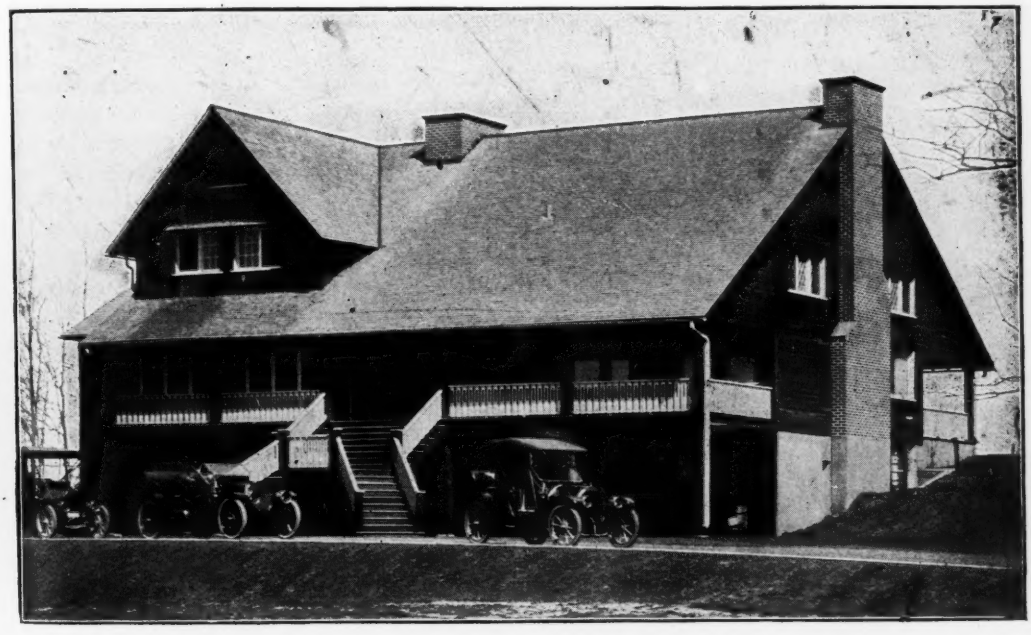
The hospital possesses excellent facilities for the work of caring for the sick. The building is well equipped, the wards bright and the private rooms sunny and pleasing. All the apartments are neatly furnished and with special reference to their use and the comfort of the occupants.

The hospital has a capacity of fifty beds, and during the past year cared for seven hundred and one patients, the highest number admitted in one month being sixty-seven.

The discipline is firm and uniform, yet mild, the "Home" principle predominating. The health and comfort of the students receive constant attention.

WOMAN'S CLUB

The Muskegon Woman's Club, organized in 1890, owns a beautiful and convenient club house situated at the corner of two fine residence streets. The building was a gift from a generous club member, Mrs. Francis Smith. The club membership numbers 280, the present president being Mrs. William A. Campbell, whose husband is a practicing physician in Muskegon.



Country Club House.

CHILDREN'S HOME

The Muskegon Children's Home is managed by the Muskegon Humane Union. It is a home for orphaned and friendless children and has a matron and trained nurse who devote their entire time to the work of caring for these children.

URSULINE ACADEMY

Ursuline Academy, Muskegon, Michigan, is a boarding and day school for girls and young ladies. The curriculum embraces primary, grammar, academic and commercial departments. The aim of the Ursuline Order is the instruction of young girls in knowledge and refinement.

COUNTRY CLUB

The Muskegon Country Club grounds consist of nearly 200 acres on the shore of Muskegon Lake. Easily reached by the street car lines. Here is one of the most extensive and naturally endowed golf links in the middle west. Bring along your golf sticks and chase the "pill" over such a course as you have never golfed before. Excellent tennis courts are also on the grounds.

The privileges of the Muskegon Country Club are extended to the members and guests of the Michigan State Medical Society.

The same charges for refreshments, etc., at the Country Club House as are regularly charged members of the club, will be made.

SOCIETY NEWS

ALPENA COUNTY MEDICAL SOCIETY

No meeting of the society has been more valuable than that of April 15. Every one of the fifteen doctors present took an active part in the discussion. In fact, the general discussion of topics is the thing that distinguishes the Alpena Society as one of the best societies. Kalamazoo and Grand Rapids have fine meetings, but the papers are mostly read by outside experts. We are justly proud of the activities of the individual members and we cordially invite comparisons in this regard with any society in the state. The subject of particular discussion was contract practice. That Alpena physicians do not propose to be imposed upon in this matter is of interest to every fair minded man. By a reasonable return for services rendered only can the doctor keep up the quality of his work.

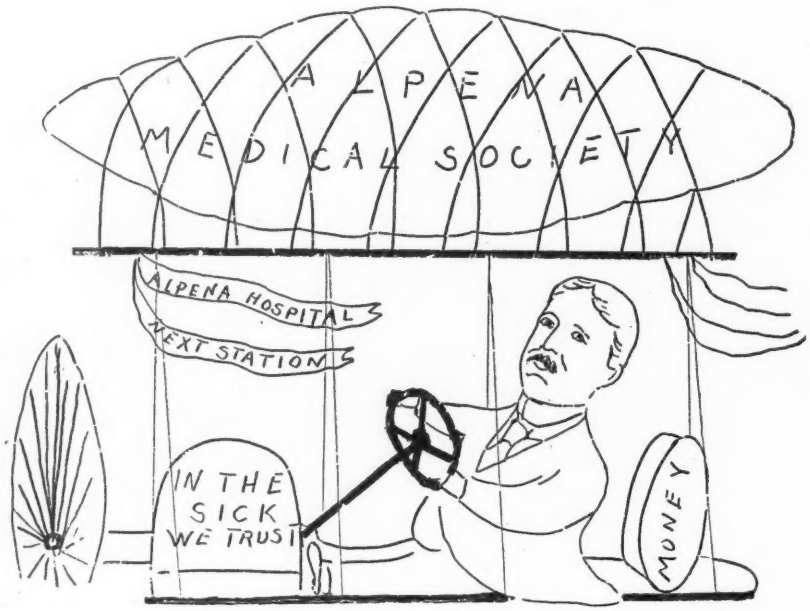
The tribute paid to the memory of Dr. Byron Deadman by Dr. J. D. Dunlop was greatly appreciated by all the members present. Dr. John Deaaman of the Soo, being present as the guest of the society, made a feeling response to the kind words of praise bestowed on his brother. Following these remarks the society immediately adjourned.

The Alpena County Medical Society entertained the clergy of the city, and a few friends at a banquet, on the evening of May 9. The object of the meeting and banquet, was the improvement of the relations existing between the professional men of Alpena. The general theme of the toasts was preventive medicine. The following toasts were responded to:

Dr. S. T. Bell, chairman; Rev. Dean Hastings, invocation; Dr. E. E. McKnight, toastmaster; Dr. C. M. Williams, "Our Medical Society"; Rev. John Dystant, Ph.D., "Preventable Accidents"; Dr. S. T. Bell, "Modern Prophylaxis"; Supt. E. L. Parmenter, "Health Education"; Dr. A. E. Bonnerville, "Modern Medicine"; James Collings, "Publicity and Prevention"; Dr. J. D. Dunlop, "Anti-Tuberculosis Societies"; Rev. Dean Flannery, "Remarks."

A most enjoyable time was experienced. The clergy promising to return the compliment at some future time.

C. M. WILLIAMS, Secretary.



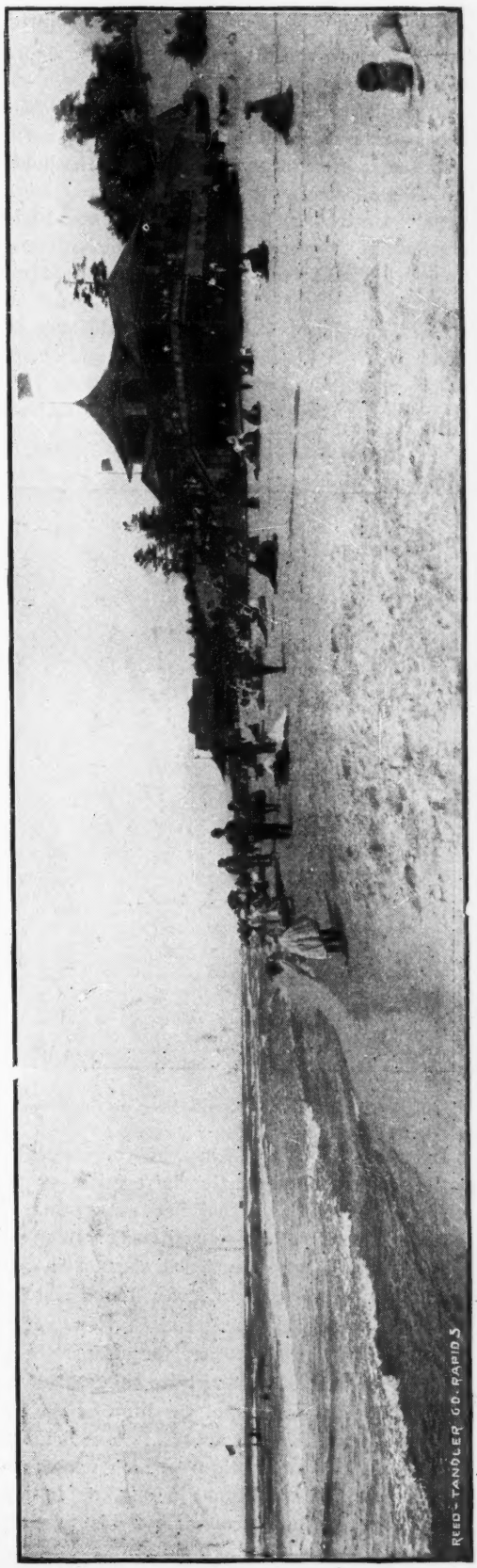
Dr. Bell takes the wheel of the Alpena County Medical Society Airship

CALHOUN COUNTY BAR ASSOCIATION

The Calhoun County Bar Association met in the Industrial Association Rooms, Battle Creek, May 9 with many of the members of the Calhoun County Medical Society, all of whom were invited as guests. The subject of the evening was of special interest to physicians:

Medical Jurisprudence Relating to Degeneracy by Mr. Wm. E. Ware, who laid particular stress upon the fact that degeneracy and insanity (which by the way he classes under the general term degeneracy) are relative conditions. It is difficult to draw a line and say this person should not be made to suffer the penalty of the law because of degeneracy and this one should suffer. In all times courts have endeavored to protect the degenerate (and insane). In savagery it was often the custom to put to death the weak and degenerate thus tending to build up a more healthy and possibly more warlike race. Mr. Ware questioned whether it might not be wise to now hold many of the degenerates responsible for their actions as a means of protection to the rest of the public. He cited instances where degenerates (or insane) have paid the penalty of the law for their crimes. (It is not necessary to cite instances where they have escaped this penalty.) He also cited many instances of geniuses who have been degenerates in mind or body. He spoke about the matter of heredity and quoted at length from standard authors, some of whom claim that as a rule degenerate traits are more apt to be inherited by the first two or three children than by subsequent ones. The inference was drawn that the decreased birth rate which is becoming more prevalent with the advance of wisdom of the human family would therefore tend to produce a weaker race.

The Duties of Counsel in Cases Involving Questions of Medical Jurisprudence was discussed by Mr. James M. Powers. Mr. Powers paid especial attention to the relation of Counsel to the Medical Expert Witness. The expert witness is called to elucidate matters of doubt which he is especially fitted to elucidate for the judge and jury. If there is no matter of doubt presented to the jury the expert witness is not needed, and if he cannot elucidate a question of doubt he might as well not be called. Mr. Powers said that in the vast majority of cases the reason medical expert witnesses are more or less unsatisfactory on the



Lake Michigan Park Beach.

witness stand is not because of lack of ability, but is because the attorney calling the expert has not prepared himself sufficiently upon the matters he wished elucidated by the expert. The attorney should furnish the expert a sufficient time in advance, with a list of the points he will be expected to cover, and an outline of what is desired to be shown. He should also caution his expert upon the particular questions which might be asked, either in direct or cross examination. This is to allow the expert to prepare himself. He should be given plenty of time for this preparation and should not be expected to answer any questions from his general knowledge, or in an offhand manner. It is especially desirable therefore that experts be cautioned by their Counsel and prepared for the cross examination. The expert should know enough law to understand his rights and what is required from him.

In the discussion Judge Wisnor of Marshall stated that he has always looked with approval on the plan in vogue in France in dealing with questions of expert testimony whether medical, mechanical, or otherwise. In France whenever during a trial questions requiring expert interpretation arise, these questions are taken from the jury and referred to a referee board of experts; whose findings shall be given to the jury, as facts. The papers were also discussed by

Old People's Home—Muskegon's latest benefaction.

Instances were cited in which medical experts of national reputation have failed on the witness stand because they had not given sufficient preparation to obscure items about which counsel should have cautioned them. The expert is called to explain away doubt and his direct testimony has that end in view. It is not the duty of the attorney for defense to explain away doubt, but simply to raise a reasonable doubt in the minds of the jury. If he can do this by making the expert look ridiculous, by making him admit things which upon careful thought he would not admit, or in any other way, he has accomplished his purpose. Attorneys C. E. Lewis and A. N. Ford and by Drs. J. C. Brown, S. R. Eaton and W. H. Haughey.

DETROIT ACADEMY OF MEDICINE

At a meeting of the Detroit Academy of Medicine, held April 23, the following resolution was unanimously passed and ordered sent to THE JOURNAL of the Michigan State Medical Society, the *Journal of the American Medical Association* and the bulletin of our county society:

Resolved, That Article VI, Section 4, of the Principles of Ethics, namely, "It is deroga-

tory to professional character for physicians to pay, or offer to pay, commissions to any person whomsoever, who may recommend to them patients requiring general or special treatment or surgical operation. It is equally derogatory to professional character for physicians to solicit or to receive such commissions," be approved by the Detroit Academy of Medicine, and that any member convicted of this offense before the board of directors be expelled from membership, under Article V of the By-Laws.

RAY CONNOR, Secretary.

EATON COUNTY MEDICAL SOCIETY

At the meeting of the Eaton County Medical Society, April 25, the society voted an amendment to allow of incorporation. All our members are paid for the year 1912, and two new members have applications under consideration. The society is the largest for years.

Dr. W. E. Newark gave a paper on "Obstructions of the Upper Respiratory Tract." The paper was able and well discussed.

The next meeting will be an adjourned meeting with the Eaton Rapids Medical Club.

A. H. BURLESON, Secretary.

Scene on Muskegon Lake.

DETROIT OTOLARYNGOLOGICAL SOCIETY

The Detroit Otolaryngological Society met Tuesday, April 17, 1912, in the Wayne County Medical Building.

Dr. Guy H. McFall read a paper on Laryngeal Tuberculosis based on his observations of 368 cases. He illustrated some of the types by charts and went thoroughly into the local treatment with a certain formalin solution which has given exceedingly gratifying results.

Dr. Mercer reported two cases of nasal angioma and Dr. McFall a case of acute edema of the larynx resulting in death in a patient seen in consultation who originally suffered from a streptococcic peritonsillar abscess.

Dinner preceded the meeting. E. A.

GENESEE COUNTY MEDICAL SOCIETY

The regular quarterly meeting of the Genesee County Medical Society was held April 30 at 3 p. m. in the council chamber at the city hall. Thirty members were present.

Dr. C. G. Jennings of Detroit gave a very instructive talk on "Cardiac Arhythmia," illustrated by charts. Dr. Jennings was elected an honorary member of the society.

The technic of prostatectomy with demonstration of specimen was given by Dr. Manwaring.

Special meeting of the Genesee County Medical Society was called to order May 8th by Vice-President M. S. Knapp at 9 p. m. to consider the Owen Bill.

A résumé of the Owen Bill was read by the secretary. The following resolutions as prepared by Dr. C. B. Burr were read and adopted.

WHEREAS, The Senate of the United States has now under consideration Senate Bill No. 1, Calendar No. 651, reported favorably from the Committee on Public Health and National Quarantine; and

WHEREAS, The establishment of a Bureau of Public Health such as that for which the Bill makes provisions, has long been recognized by physicians as of every great public importance; and

WHEREAS, The Bill under consideration is clear and commendable and its provisions such as to meet the end in view; therefore be it

Resolved, That the Genesee County Medical Society at a meeting held on the eighth day of May, 1912, places upon record its endorsements of the Bill and directs that the officers of the Society communicate this action at once to the Senators and Congressmen from Michigan.

A committee consisting of Drs. Randall, Manwaring and Clark was appointed to visit the Literary and Commercial Clubs and obtain from them resolutions in favor of the passage of the Owen Bill.

A letter was read from the president of the board of hospital managers requesting the society to appint a committee of three or five to act in an advisory capacity to the Board of Hospital Managers.

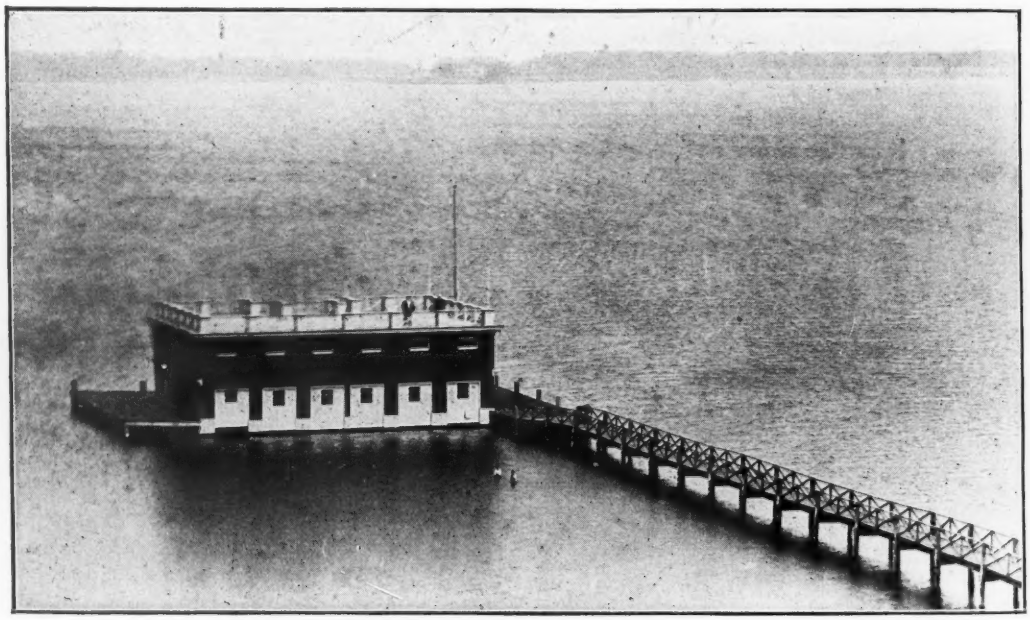
A motion was carried that a committee of three members be appointed annually to act as an advisory committee to the hospital board. That this committee now consist of Drs. Conover, Randall and M. S. Knapp.

Drs. H. D. Knapp, F. L. Tupper and E. D. Rice were appointed as a committee to take steps to obtain free antitoxin in cases where people are unable to purchase antitoxin promptly.

May 14 President Bates received a telegram from Senator William Alden Smith stating that in accordance with the request he would take great pleasure in presenting to the Senate the resolutions adopted by Genesee County Medical Society favoring the passage of the Owen Bill.

May 14 the committee on the Owen Bill appeared before the Flint Board of Commerce and received their endorsement which the Board of Commerce immediately telegraphed to the United States senators and congressmen.

C. P. CLARK, Secretary.



Boat House—Country Club.

GRAND TRAVERSE-LEELANAW COUNTY MEDICAL SOCIETY

The regular meeting of the Grand Traverse-Leelanaw County Medical Society was held on the evening of May 7 in the offices of Dr. E. R.

Minor. Seven members were present. Minutes of last meeting were read and approved.

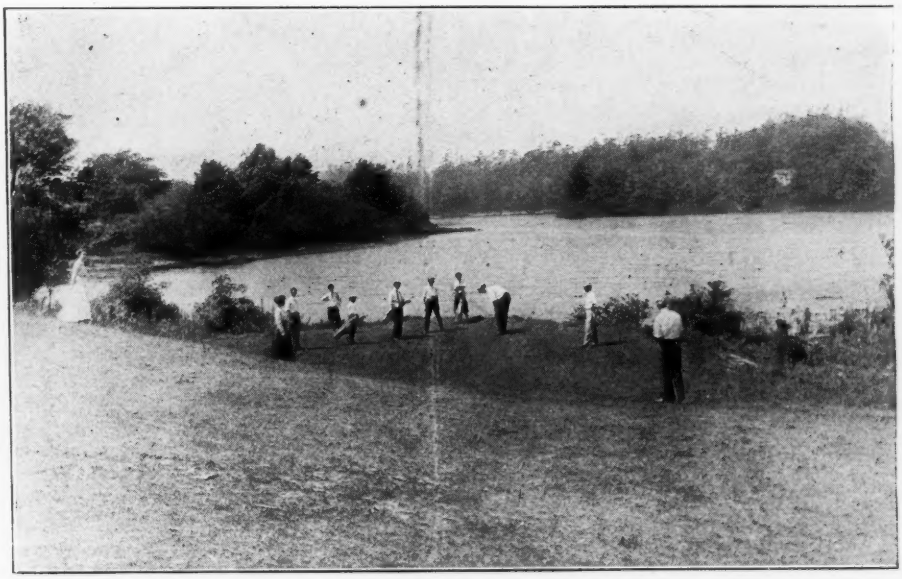
The committee on public health gave a report of the work accomplished so far this year.

Dr. W. D. Mueller was elected delegate to the state meeting and Dr. G. W. Fralick was elected alternate.

Dr. G. M. Johnson read a paper on Vaccine Therapy followed by a general discussion.

Dr. F. Holdsworth read a report of a case of Cellulitis of the Orbital Region. It was decided to hold a special meeting May 21, which time all back papers will be presented.

R. E. WELLS, Secretary.



Lake Harbor Golf Links.

HOUGHTON COUNTY MEDICAL SOCIETY

DR. LAWBAUGH BANQUETED

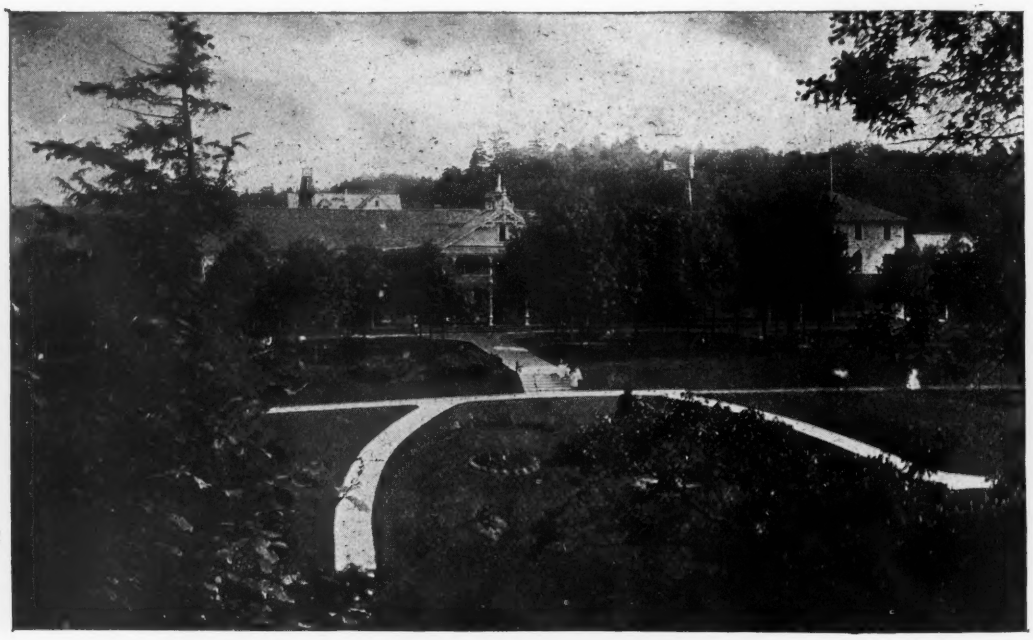
The members of the Houghton County Medical Society assembled at the Miscowaubic Club, Calumet, Michigan, Wednesday evening, April 24, 1912, at a banquet given in honor of Dr. Albert I. Lawbaugh, of Calumet, who for the past forty years has been engaged in the active practice of his profession in Houghton County. Dr. Lawbaugh has long been regarded both by laymen and his professional colleagues, as the leading physician of the copper country.

After a splendid banquet had been served, Dr. W. H. Dodge, of Hancock, who acted as toastmaster, opened the program of the evening by calling on Dr. P. D. Bourland, of Lake Linden, for a response to the toast "The Older Man Up-to-Date." Dr. Bourland paid a high tribute to the honored guest of the evening, who, having commenced his professional life at the beginning of what has been the period of greatest growth and advancement in the history of medicine, has still found time during a busy and arduous life to keep abreast of the times in every department of his profession. "And so we have him here with us to-night, older in years than any of us—still a leader. His career should be an inspiration to us."

Dr. A. F. Fischer, of Hubbell, responded to the toast "The Master of Opportunity." "I have always believed," said the doctor, "that all of us should take a certain amount of time to take up the sentiment of hero worship. I do not believe that hero worship should always be extended to the past ages, but we should appreciate the heroes who are here in our midst —those who have blazed the way in times past for us to follow, and who are still striving for higher standards. I think the great secret of our brother's success has been the mastership of his opportunities."

Dr. W. K. West, of Tri-Mountain Hospital, spoke of "Dr. Lawbaugh as a Consultant." He recounted many experiences extending over a period of twenty-three years, showing the respect and confidence in which Dr. Lawbaugh was held by his patients: "If patients were sick and likely to die, they wanted Dr. Law-

baugh; if they were not very sick, or at least I did not think they were very sick, they wanted him just the same. Dr. Lawbaugh had a broad knowledge of medicine and surgery, unusual skill in diagnosis, and excellent judgment. It seemed to me the doctor always handled these consultations with a great deal of tact, and the patient always felt better for his coming, and I felt that not only was the patient benefited, but I was benefited and had learned something. I know of no better compliment to pay our honored guest than to say that while he has had the esteem and confidence of the people to an unusual extent, he has always possessed the confidence and esteem of our best practitioners. That is one of the principal reasons why he has had such an extensive practice and always been in such demand.



Lake Harbor Hotel.

Dr. C. H. Rodi, of Calumet, who came to Calumet in July, 1886, as assistant to Dr. Lawbaugh, and who has for the past twenty-five years been intimately associated with him in his work, in "Reminiscences of a Pleasant Association" related many amusing incidents that had occurred during their years of association. One of these incidents illustrating the doctor's insistence on punctuality was as follows: "I remember one of my first experiences in this regard: I was coming down to the Osceola office one cold winter day—I always was there one or two minutes before 1 o'clock. I noticed a couple of fellows without any coats or hats trying to keep warm before a small fire they had started at the roots of a stump. As I came into the office the doctor was busy. "What do those fellows out there near the stump want?" I asked. "I am teaching them the office hours," replied the doctor. "I will teach them to come around before 1 o'clock." One of the doctor's greatest failings was punctuality. It used to be said that the movements of a watch could be set by the movements of the doctor. The secret of the doctor's success is a thorough preparation by study, equipped with a very extensive and complete library, and keeping up and abreast of the times by constant study; and devotion to the highest ideals in the practice of medicine has enabled him to improve the opportunities he has had.

Dr. E. T. Abrams, of Dollar Bay, who early in his professional career was a student in the office of Dr. Lawbaugh, spoke on the topic, "Dr. Lawbaugh as a Preceptor."

Mr. Toastmaster and Gentlemen: When we come down to the real philosophy of the law of being, God's plans are long plans. His vine is a vine of power and influence, and His sheaves are sheaves that wave not over short

furrows, but rather over vast centuries of time. Take, for instance, our own great country with its immense wealth. It is so great that the very mention of it staggers the imagination. But to whom does it really belong? Most assuredly not to the men and women of to-day, but rather to the frolicking children in our streets and the babes in the cradles of our land. These are they that never have yet sowed a seed, or turned a furrow, and yet they are to reap this mighty harvest. These babes will ride in cars and boats they never built; they will have the benefit of the great engines they never invented; they will reside in cities they never founded; in homes they never built. The wonderful literature of the past will be theirs, though they never wrote a word of it; and, most of all, they will enjoy liberties they never won.

Ptolemy thought the great blue sky above us a dome, and that the stars were but holes in that dome where God placed burning candles, and that the moon itself was but one of those holes, only larger, opening into the palace or mighty banquet hall of the gods, which was always light. It took generations of astronomers to overthrow his theory and make way for the coming of Sir Isaac Newton, and when the world heaped honors upon him, it quite forgot the generations of unseen workers of the past that made him possible. And so it is in all human undertakings; all professions and all achievements.

The sum total of medical knowledge to-day represents the accumulative efforts of all the past, even from the priestly incantation of Egypt to Pasteur and Lord Lister. But while we owe much to the remote past, it is really during the present quarter of a century that our knowledge has come to us by leaps and bounds. It has been the good fortune of many of us here to-night to have been the babes and frolicking children, professionally considered, at the beginning of that period, and hence we have gathered sometimes where we have not sown, and harvested sometimes where we have not strewn.

Lake Harbor.

At the beginning of that period, the greatest influential factor in our profession as a whole, was the Preceptor, for it was by close association with him that the idea of a newer and grander era in medicine was impressed upon us. It was he who first caught the enthusiasm of the opening day and impressed his individuality and personality upon us.

It was my good fortune, at the period of which I speak, to become the student in the office of Dr. A. I. Lawbaugh, whom we all have loved these many years, and to whom to-night

we pay especial honor. I had already spent some time in the office of another practitioner, and therefore had some idea of the condition of things, but was by no means prepared for the strenuous work, the push, and enthusiastic progressiveness, that my new preceptor not only possessed, but infused into all his work, until it became contagious and infected all of those about him, or with whom he came in contact.

It was in the early days of antiseptics, and during the passing years, as they have gone from sight, the apparent ease with which my preceptor adjusted himself to absolutely new conditions, still remains a marvel in my mind. very early impressed me was his conservation of time. His whole life was method, and method so as to waste the least amount of time; consequently, the amount of work he accomplished was prodigious.

At that time his custom was to give me set readings followed after the day's work by a quiz, that I wish to state right here put most of my college quiz masters in the shade. After he had gone over a subject fully, the next move was unexpectedly to bring me to the bedside and there give me the actual demonstration of what I had been reading about. His complimentary remarks as to my ability to remember or translate my knowledge to potential ability

Beach—Lake Harbor.

Far removed from large centers of medical thought and experimentation, he nevertheless, a humble country practitioner, followed so closely in the footsteps of the advance guard, that scarcely had they begun to do a new operation in New York or Boston, than he was so devoutly studying its details with such intensity and concentration of thought, that he soon seemed to have mastered its technic; and so, in the homes of patients, without trained nurse or trained assistants, with no hospital facilities, he was duplicating the work of the masters with exceedingly gratifying results. Of course these were the days of antiseptic surgery. His motto was *work*, and by "work" I mean in the larger and broader sense. One of the things which in a given case, were not such that would lead any young man to early assume that Divine Providence had especially equipped him to set the world aright, either medical or otherwise. "Better study, learn something, and know it, if you expect to amount to anything," was most often heard. Not said, however, in a spirit of austere severity, but with the ring of honest conviction.

Dr. Lawbaugh performed for me, as his student, a great service; he taught me how to study and how to think. This is truly the greatest service a great teacher can perform. Had he elected to teach, rather than lead a whole section of the medical profession to a

higher level, he would have been numbered among our great teachers.

Dr. Lawbaugh taught me to idealize my profession. As my preceptor he took my hand and led me up, up, out of the dust, cobwebs and mustiness of commercialism, into the clear sunlight of industry, devotion and service. Mere living is not life. And so, gentlemen, if, as I view my own professional building at the close of a quarter of a century, I see it incomplete, unfinished, marred, and by no means a thing of beauty, yet I know and can assure you that it was begun upon bed-rock by a preceptor who insisted that into its foundation should go nothing of dross or baser methods, but only those things which if rightly taken and rightly used build for worthiness, beauty, stability and endurance.

And so to-night, Dr. Lawbaugh, out of a heart full of thankfulness and grateful remembrances, I wish to add this word of appreciation to that of your many friends here assembled: May the hand of Time sit lightly upon you, so that your noble example of professional uprightness and helpfulness may for years to come be an incentive and an inspiration to the Medical Profession of this section.

Dr. A. B. Simonson, of Calumet, in responding to the toast "Dr. Lawbaugh's Relationship to the Young Practitioners" said: With your permission I wish to refer for one moment to some of the pioneers in the practice of medicine in this district, as a sort of a historical prelude to what I wish to say later. I have had the honor, as well as pleasure, of meeting and knowing some of the older physicians of the Copper Country, and I wish to call your attention to the names of such men as Dr. Osborn, who began his medical career as physician for the Toltec Mining Co. in 1848; later he was physician for the National Mining Co., and still later, and for a number of years associate physician for the Calumet & Hecla Mining Co.

Dr. Flanner, who came to the Copper Country as physician for the Minnesota Mine in Ontonagon County. After a few years of successful practice he returned to his native state—Missouri; but he was again called back to the Copper Country, and became physician for the Quincy Mining Co.

Dr. F. E. Fletcher began the practice of medicine in Detroit in partnership with the late Dr. H. O. Walker, which he gave up in a few years and came to the Copper Country as physician for the Allouez Mining Co.; later, and for a number of years, he was associate physician for the Calumet & Hecla Mining Co. at Lake Linden.

Dr. E. H. Pomeroy began the practice of medicine in Indiana but soon after came to the Copper Country as physician for the Osceola Mining Co.; later and for a number of years he was associate physician for the Calumet & Hecla Mining Co.

Dr. Plews was physician for the Quincy Mining Co.

Dr. Downer began the practice of medicine in Ontonagon county; later became physician for the Quincy Mining Co.

Dr. Solis began as an assistant to Dr. Shepherd at the Quincy Mining Co.; later was physician for the Minong Mining Co. at Isle Royale, and still later physician for the Allouez Mining Co.

To-day, about the only man living and still in active practice, is our guest for the evening, Dr. Lawbaugh, who connects the present generation of practitioners with this grand galaxy that I have just mentioned. They were broad, liberal-minded, generous-hearted men; with all their virtues and a few faults, they were successful men. Beginning as a rule with a small foundation, they built a superstructure that you may all envy. Not only were they successful men, but they were invariably kind to the young men, ever ready and willing to help them over the hard places, and to meet them in consultation, or assist them at their work. You were always the better for it, and you went away feeling assured that you would not lose your patient.

To my mind, Dr. Lawbaugh possesses all these qualifications and is a representative of all the good principles, the high ideals and all the excellent traits that were possessed by these older men, particularly in his relationship and in his dealings with the young man, and that is why your attention was called to these older men—to impress upon your minds more forcibly that we have to-day a true representative of that period; to be sure, he has surpassed them all in his attainments, but the consideration shown the young man by his advice, by his kindly criticism, his thoughtfulness and his ever readiness to help and assist the young man; this, taken with his upright character, his example as a man, as a physician, a man to be trusted in the home, a man to be trusted with your patient. We have always had and felt the utmost confidence in him; if there is any one

motto or advice I would suggest he could give the young practitioner to-night it would be this:

"Be men, high-minded men,
With powers as far above dull brutes imbued
In forests, brake or den,
As beasts excel cold rocks or brambles rude."

Dr. Joseph E. Scallon, of Hancock, in responding to the toast "Dr. Lawbaugh's Influence upon Medicine and Surgery in Houghton County," said: I wish to congratulate the men of the younger generation, and congratulate ourselves, upon this meeting to-night. It is so different from what we could have had when Dr. Lawbaugh and I were young practitioners, either in Houghton or Keweenaw Counties. The medical profession was represented by few members; we were far apart, and it was difficult for us to get together. The representatives of our profession in Houghton County have always had a very high standard of excellence and I have always been proud to be admitted to membership among you. Dr. Lawbaugh has always been at the front in the advancement of medical science in this county and we all had to jump into step when the doctor came to Houghton County. He set the pace and has kept us humping ever since to keep up with him; but by the time we got up to where we thought Dr. Lawbaugh was, he was still a step ahead of us. The crowning glory of his life as a medical man has been the enthusiasm and love which he has for his profession. He has always done his work and done it well; perhaps that is the highest compliment we can pay a colleague—doing a man's work and always doing it well.

Dr. Lawbaugh's response to the toasts of his colleagues was as follows:

Forty Years in Practice

In the past forty years great progress has been made in all kinds of work, but none greater or of more benefit to mankind than in our own profession of saving human lives and the prevention of disease. There is a great contrast between the present practice of medicine and surgery and when I entered the practice in Keweenaw County. Then even in large cities, we had few instruments of precision; only the stethoscope, fever thermometer and the microscope, all rather crude and by many considered toys rather than of practical value. The hypodermic syringe was practically unknown. It is true the diagnosis of disease was often very exact, but it was made by master minds on clinical evidence alone. In obstetrics, my teacher was the celebrated Prof. Skene, but the methods of those days were somewhat crude compared to the present day. In my first cases of obstetrics, the nurse was some kind neighbor usually, and for my use, a tin basin which was used for many and various purposes, soap of family use, a towel not particularly sterile, and a saucer of lard were provided. It was not thought necessary to wash hands before the examination, because it was put into a place already contaminated and it was better to wash afterward, and not before. When I asked for some clean material to place under the patient, I was handed a bundle of rags which the woman had saved up during the period of pregnancy for the present occasion.

The only surgical operations were amputations, ligatures and sutures entirely of silk, and for drainage the ends of the ligatures were left long and passed out of one corner of the wound.

People were surprised when I advised the removal of tumors, and other surgical operations, as this was entirely unknown. In my first surgical operations I had very little assistance from professional men as my neighbors were few and some distance away. My anesthetist was a mine clerk and my assistant a neighbor or some person willing to help. In this way, after having performed several operations with a successful outcome, there was less trouble in persuading our patients to submit to operation.

Much objection was made at first to the use of the obstetric forceps, and I knew several physicians who did not possess one. The happy use of this necessary instrument was soon established.

As time went on, I found it was necessary, in order to do the best work for my patients, to take post-graduate work, but I was practically alone from this field.

We had no hospitals in those days, except a few for injured men. We had what one of my neighbors denominated kitchen operations; that is, we generally took the kitchen, or some other

room, cleaned it thoroughly, using the best antiseptic precautions we could under the circumstances. We had no trained nurses, the nursing being done by some friend of the patient under instructions of the physician. In medicine, but few drugs were in use, salts, calomel, some preparations of iron and opium.

The success I have had was not due entirely to my own efforts, but also due to the faithful cooperation of colleagues, who by their assistance made success possible.

Now, gentlemen, before closing I wish to thank you very much for this testimonial of esteem. What you, my dear friends here present, have done for me to-night, surpasses anything that I at any time in my life ever dreamed of. It is the mile-stone of my life, compared with which all other events sink into insignificance.

You certainly have passed far beyond any ambition that I ever had. Friendship is one of the things that adorns and sweetens human life the most. It is pictured by orators, in legends, and in Holy Writ. It begins with our youth, it cheers our manhood, and in our declining years illumines our days as with the glories of the setting sun.

This event shows me that my association with you in times past has been one of genuine friendship. As I look back along the vista of years, I can say with feelings of deep sincerity, that I am not only pleased but deeply gratified that my association with you has been such as to honor me by this event, and the kindness of heart that inspired it.

When my work is finished, I shall be content to look back to your kindness to-night, and shall feel that I, perhaps, have not lived in vain. For this token of friendly love I wish to express my heartfelt thanks, and that it has been in your hearts and minds to do it now when I am still among you, so well expressing the thought of the late Professor Eastman:

"Bring flowers while the eyes still see;
Speak words of cheer while the ears still hear."

INGHAM COUNTY MEDICAL SOCIETY

During the month of April, the Ingham County Medical Society has held three special meetings at Lansing. On April 2 Dr. L. C. Towne discussed "Prostatitis and Vesiculitis." The paper was thoroughly discussed by all members present.

On April 16, Q. O. Gilbert gave a paper on "Rabies." He demonstrated Negri bodies from the brain of a rabid dog stained by neutral fuchsin and methylene-blue and discussed their diagnostic significance. The importance of not immediately killing dogs suspected of having rabies was emphasized, with the advice that such dogs be tied up, awaiting the development of further symptoms. The various methods of giving antirabic treatment were explained, emphasizing the fact that the immunity thus produced would protect against from only two to three times the minimum fatal dose of virus. The importance of local treatment for the purpose of getting rid of as much of the infecting virus as possible was thus shown, for which he advised the use of formalin, which appears to have a special selective action for rabic virus, for which reason it is relatively more valuable than nitric acid or other antiseptics. Carbolic acid should not be used, as experiments have shown that this substance has relatively very little antirabic action, failing to kill the virus in concentration even as high as 2 per cent. strength under twenty-four to thirty-six hours.

On April 30, two papers were given, one by Dr. F. A. Jones on "Diphtheria and Its Complications," and the other by Dr. M. L. Cushman on "Recent Advances in Brain Surgery." Dr. F. A. Jones emphasized the value of accurate diagnosis in all cases of suspected diphtheria, and the use of laboratory methods for this purpose, as well as the control of quarantine. He reported the results of over one hundred and fifty cases that had come under his observation in his official capacity as health officer during the last four years. Among these there had been eight deaths. He dwelt upon the cause of death in these cases and pointed out that the fatal cases had either not been treated with antitoxin or the antitoxin had not been administered until the patients were in a dying condition. He expressed the opinion that practically all diphtheria patients could be saved by early use of antitoxin and advised the use of large doses.

Dr. M. L. Cushman discussed various surgical diseases of the brain and reported several very interesting cases. He demonstrated the pathological conditions of two brains removed post-mortem, giving the anti-mortem history of each case, the one being a case of brain syphilis with extensive gummatous involvement and the other one of secondary sarcoma.

M. L. HOLM, Secretary.

KALAMAZOO ACADEMY OF MEDICINE

Meeting of April 9

Abstract of paper given by Dr. E. J. Bernstein on

Reflex Nasal Neuroses

A reflex neurosis is simply a normal reflex run riot, being unduly called forth by some pathologic lesion somewhere. The nose, by reason of its intimate connection with sympathetic nervous system through its intricate nerve supply and the great number of structures liable to injury by disease, is a veritable mine of disaster for the individual. Most of the ills afflicting it are announced by symptoms, which may be called forth by a number of maladies. Asthma, asthenopia (painful use of the eyes), cough, headaches, nose-bleed, tinnitus aurium, deafness, vasomotor rhinitis, hoarseness and aphonia, diminution of physic energy and enuresis were among the cases treated and cured by proper treatment of nasal disturbances. All of these are but symptoms of reflex neuroses, and may be called forth by disease elsewhere.

The intimate relation of the generative organs and nasal disorders has claimed the attention of clinicians for many years. Vicarious menstruation, in phthisis and pregnancy is a common observance.

Undue indulgence and masturbation are well recognized causes of nasal obstruction and nasal reflex neuroses.

The relation of the sense of smell and erithism is a recognized fact and a remaining atavistic trait from the lower animal life from which man sprung.

Abstract of paper given by Dr. Blanch Epler on subject,

Some of the Facts in the Infant Feeding Problem

The solution of the infant feeding problem should be, primarily, applicable to the undeveloped infant.

In the valuable work being carried on, the series of cases of the different pediatricians present under dissimilar conditions. Finkelstein working with boiled milk, engrossed in metabolism, not meeting with the violently toxic cases of our American cities, ignores the bacterial factor in disturbed digestion, and treats his cases collectively.

The obstetrician has a distinct pediatricial responsibility, for the early disturbance of the normal balance in the infant can be largely avoided by interested, deliberate, intelligent care of the infant.

Gastric Digestion: All functions are present as in the adult, in lessened degree. Rennen and pepsin are present in health and disease in excess of hydrochloric acid; Lipase is present in cells of the mucous membrane as well as in gastric contents, and digests 12 per cent. to 40 per cent. of fats ingested.

Lime water stimulates the secretion of HCl, and though neutralizing the free HCl, may prove detrimental to the digestion. The administration of sodium citrate destroys HCl and minimizes the combined acids.

Examination of stomach contents is valuable to some cases, but the contents, because of casein affinity for HCl, should not be filtered. Hyperacidity and Hypo-acidity are of differential diagnostic value.

Duodenal Disturbance: The duodenum is the "battle field" in disturbed digestion.

Hess' duodenal tube is most practical, and examination of secretions and contents will be as valuable, in the event of uniform methods, as the study of the urine in kidney disturbances.

Lipase in mucous membrane should be capable of reverse action on the fats within the cells. Neutral fat is found in the thoracic duct, though absorbed as a split fat. Fat has twice the food value of proteid and sugar. Both furnish 90 per cent. of body requirements, and are interchangeable in value.

Fat is a common disturbing factor in digestion—the degree, kind and cause of disturbance largely ascertained by examination of the stools, both gross and microscopical.

Finkelstein's and Myers' work on sugar as a factor in digestion shows strong findings. Lactose tolerance is low in a healthy child, and markedly low in intestinal disturbances; it is slowly absorbed, allowing growth of excessive fermentative bacteria.

Lactose and saccharose, absorbed as such, remain the same and are excreted the same. Maltose changes in the body cells to monosaccharides; it is most easily absorbed. Tolerance is greater than for lactose and saccharose, and it produces of all sugars the greatest in weight.

There are specific diarrheas due to such organisms as the Shiga and Flexner bacillus, streptococcus, staphylococcus, *Proteus vulgaris*, colon, etc. The infections are frequently gen-

eral Nutritional disturbances likewise are general rather than local. Excellent results from specific serum in case of Shiga and Flexner infections are obtained.

The type of bacterial flora in the intestine is a definite factor in digestion, and disturbed digestion may be controlled by the kind of food administered.

Normal flora of the young nursing infant is fermentative, and overfeeding is the most marked factor in functional disturbances.

Cellular activity is shown to be most active with ingestion of water. Some cause other than the bacterial contents of milk is the reason for the decrease of mortality in infants being at a standstill. New York has an annual death-rate of 16,000.

The close study of the infant is imperative for its welfare. It has a right to as scientific methods as are used in the adult.

C. E. BOYS, Secretary.

INVITATION FROM THE MUSKEGON-OCEANA COUNTY MEDICAL SOCIETY

Come to Muskegon for the 47th annual meeting of the Michigan State Medical Society. Come for the meeting alone if that is all the time you can spare. The meeting will be well worth it; but if you can take a little vacation come to Muskegon not for the meeting alone, but also for an outing, a good rest or pleasant recreation. Come a week before the meeting and stay until a week after the meeting. Bring your family with you.

We have boating, fishing, bathing; all the very best of its kind. Bass fishing in the lakes, perch fishing at the piers, brook trout fishing in the streams near by. Excellent roads for automobiling. Boats for lake trips. Recreation of various kinds at Lake Michigan Park Beach.

July weather about Muskegon Lake is not oppressive; it is exhilarating.

The Muskegon Country Club offers you the use of the best golf links and tennis courts in the middle west.

Muskegon's summer hotels will care for you agreeably and at very reasonable rates.

Come to the Michigan State Medical Society meeting by all means and bring your family.

MUSKEGON-OCEANA COUNTY MEDICAL SOCIETY

Regular meeting of the Muskegon-Oceana County Medical Society was held at the residence of Dr. L. N. Eames, Friday evening, March 22, 1912.

Members present: Drs. Geo. S. Williams, I. M. J. Hotvedt, F. B. Marshall, J. F. Denslow, J. T. Cramer, G. J. Hartman, W. P. Gamber, W. A. Campbell, A. A. Smith, L. N. Eames and V. A. Chapman, and Dr. Parker of Hackley Hospital as guest.

The minutes of the last meeting were read and approved as read.

A communication from Hon. J. C. McLaughlin regarding the Owen bill was read.

The committee on public lecture reported that Dr. M. P. Ravenel of Madison, Wis., could be secured for a lecture Saturday evening, April 20. The committee was instructed to try to arrange for some date other than Saturday evening.

A communication was read from Dr. Wilfrid Haughey, Editor of the JOURNAL of the Michigan State Medical Society requesting copy and cuts relative to Muskegon for the June number of the JOURNAL to make it a Muskegon number.

A communication was read from the committee for Public Health Education among women of the American Medical Association requesting the appointment of a Public Health committee for this Society. The president appointed as this committee, Drs. Eames, Cramer, Hotvedt and Powers.

Dr. Eames read a paper on "Clearer Diagnosis and Simpler Treatment." The discussion was opened by Dr. Campbell followed by Drs. Hartman, A. A. Smith and others.

It was moved, seconded and carried that Dr. Eames' paper be sent to the editor of the MICHIGAN STATE MEDICAL JOURNAL for publication.

After luncheon meeting adjourned.

Regular meeting of the Muskegon-Oceana County Medical Society was held at the Occidental Hotel Friday evening, April 5, 1912, following banquet at 6 o'clock as the guests of Drs. G. J. Hartman and W. P. Gamber.

Members present: Drs. Geo. S. Williams, L. N. Eames, L. I. Powers, J. M. Vander Ven, A. F. Harrington, J. T. Cramer, R. G. Olson, P. A. Quick, F. W. Garber, N. DeHaas, Jacob Oosting, J. F. Denslow, W. P. Gamber, A. A.

Smith, G. J. Hartman, W. A. Campbell, F. B. Marshall and V. A. Chapman.

As guests, D. Emmett Welsh, of Grand Rapids, president of the Michigan State Medical Society; Dr. Wilfrid Haughey, of Battle Creek, Secretary of the Michigan State Medical Society; Dr. Earl Bigham, of Grand Rapids; Dr. N. H. Kassabian, of Coopersville, and Dr. H. C. Parker, of Hackley Hospital.

Dr. Welsh read a paper on, "Affections of the Eye in Relation to Kidney Lesions."

Dr. Hartman read a paper on, "Diagnosis and Treatment of Kidney Lesions."

The discussion was opened by Dr. Gamber, who was followed by Drs. Haughey, Bigham and others.

Dr. Welsh and Dr. Haughey each gave a talk on matters concerning the coming meeting of the Michigan State Medical Society to be held at Muskegon.

It was moved, seconded and carried that this Society requests the date of the Michigan State Medical Society to be changed from the 19th and 20th of June to the 10th and 11th of July. Meeting adjourned.

V. A. CHAPMAN, Secretary.

WAYNE COUNTY MEDICAL SOCIETY

At the meeting on the evening of April 8, 1912, on motion the program was postponed and an adjournment taken. The Society immediately reconvened as a special Memorial Meeting to honor the memory of its suddenly deceased President, Dr. H. O. Walker, Vice-President Schenck and Secretary Cullen presiding.

Dr. Ernest L. Shurly presented a Memorial Address on the life of Dr. Walker. On motion this Memorial Address was adopted as the Society's memorial resolution and it was ordered spread on the minutes of the Society and especially prepared copies sent to the family, the State JOURNAL and the *Journal* of the American Medical Association.

Following Dr. Shurly's address, the following members spoke along the same lines, Drs. J. H. Carstens, Eugene Smith, F. B. Tibbals, James Samson and Rolland Parmeter.

At the General Meeting on the evening of April 15, 1912, Dr. C. W. Hitchcock read a paper entitled "Some of the Inter-Relations of Medicine."

A letter was read from Police Commissioner Croul, which on motion is here reproduced.

To the President, Wayne County Medical Society:

Dear Sir: Numerous complaints have been made by officers of this department that unwarranted advantage is being taken by a fairly considerable number of physicians of the use of the red cross on their automobiles.

There have been cases brought to my attention where doctors or physicians were speeding in a manner that endangered people getting on or off cars along Woodward and Jefferson Avenues in the busy hours—in fact it has reached a point where there must be a radical change, otherwise the need of protecting the public from this condition will make it necessary for me to instruct officers to pay no attention to the use of this insignia, which I certainly would regret very much.

Very respectfully,

F. H. CROUL, Commissioner.

The following applications for membership having been favorably considered by the Board of Directors, were, on vote of the Society, accepted for membership, the first two to active and the others to associate membership:

E. V. Joinville, D. C. of M., '09, Detroit.

A. Wm. Lescohier, D. C. of M., '09, Detroit.

C. F. Meek, Queen's Univ., Ont., '99, New Baltimore, Mich.

Fred Grover, Cleveland Coll. P. & S., '86, Fraser.

G. G. Roberson, D. M. C., '77, Utica, Mich.

V. H. Wolfson, D. C. of M., '09, Mt. Clemens, Mich.

The change in date for the meeting of the Michigan State Medical Society for most members of the Wayne County Medical Society is most unfortunate, therefore, following some discussion and on motion, the Society instructed Councilor Biddle to vigorously protest against it.

The Secretary read the recent editorial in the *Journal* of the A. M. A. on "What's the Matter with Michigan." The president then introduced Mr. Hugh Shepherd, Prosecuting Attorney for Wayne County. Mr. Shepherd in a vigorous and eloquent address, told of his proposed campaign against "quack doctors" and "illegal practitioners" in Wayne County and asked both the active and moral support of this Society. He said in part: Since my action against certain quack medicine men last Saturday, I have been pleased with the manifested support and offers of assistance by many of your profession. It seems strange that the

prosecuting attorney has to wrestle with these and various other problems of reform. Why has it been necessary for me to do this? Simply because it was not done when I took office. Why not? Because the average public official wants to perpetuate himself in office. This perpetuation in office of incompetent officials is made possible because the law abiding citizens do not vote, while the rabble does. No public official can conscientiously put his personal interests before the interests of the general public. It makes no difference what becomes of me if the interests of the people are safeguarded. In the various recent raids against cheap dance halls, slot machines, loan sharks and quack doctors, our efforts would have been fruitless without the active support of the police department. We also owe much to the publicity given by the newspapers.

He outlined the methods of these quack establishments and compared the principals to highway robbers. One of these concerns had receipts of over $4,000 a month.

Mr. Shepherd then asked the support of the Society in his campaign against these people and suggested the passage of certain laws by which they could be "run out of business." He was emphatic in his assertion that the State Board of Registration should take action to revoke the licenses of the physicians attached to these quack concerns.

Following the address, on motion, the Board of Directors was asked to appoint a committee of three to assist the prosecuting attorney in his fight against "illegal practitioners."

Some of the Interrelations of Medicine

By Charles W. Hitchcock.

"The principle of division of labor has come late in medicine and has been forced by the widening field which makes it impossible for any man to well cover the whole.

The specialist has every incentive to be a broad rather than a narrow man, if he have a correct grasp of his special field and its relations. The boundaries of the different fields cannot be hard and fast lines but those active in any one field will be little likely to intrude greatly upon details outside their own sphere of work. The whole patient, however, must be studied and the specialist not wear "blinders" which narrow his view.

With internal medicine neurology is in particularly close relation. The dependence of the nervous system for its integrity upon an unimpaired blood-supply relates nervous diseases to the problems of cardiovascular departures from the normal; altered blood-pressure, changes in the blood itself, the toxemias, etc. The apoplexies are here intimately connected.

Pernicious anemia entails marked cord-changes which find their clinical expression in various subjective symptoms, spastic paraplegia—mental symptoms, etc.

There are many nervous symptoms of obscure origin which have their seat in an altered circulation.

The pathology of the kidney likewise involves many distinctly nervous symptoms which relate the neurologist to renal changes. The nephroptoses and the enteroptoses as well are profound disturbers of nervous balance. The pathology of the glands of internal secretion likewise gives rise to frequent nervous disturbance.

The surgeon, the gynecologist, the oculist, the aurist, the neurologist, all of them find their fields not infrequently touching that of neurology. Each needs at times the help of the other and we all need that breadth of view which shall make us harmonious workers, helpful to each other in working out the intricate problems of medicine."

Dr. J. H. Carstens, in discussing the paper, said: Virtually I agree to everything that Dr. Hitchcock said. It is simply the question of correct diagnosis, for which I have pleaded continually. The family physician must know what part is diseased, and if he cannot tell the exact condition call in a specialist to help him, sometimes he will have to call in two or three, as conditions point to one or the other kind of trouble. In the development of the specialist, I have always claimed, he should be a product of evolution, and must be first, a general practitioner to get big, broad views in the field of general medicine, when he graduates he may want to take up a certain line in the future, but by being a general practitioner he may find that he is adapted on an entirely different line, and may become a great internal medicine man, when he started out to be a surgeon.

Dr. Emil Amberg said that the construction of the human body is such that the absence of close interrelations would be utterly surprising. He cited as illustrations cases of apparent nose and throat affections in which the Binet tests, tests to establish the mental age of the individuals, were helpful in diagnosis, a case in which the differential diagnosis between refrigeratory and otitic facial paralysis

was difficult and in which further development showed necrosis in the mastoid process, a case of changes in the region of the cerebellum and pons in which the Vienna tests for labyrinthian disturbances shed light on the condition which in all probability was of a specific nature and a case of a hysterical attack during an acute otitis media. In consultations he has frequently encountered an excellent diagnosis per exclusionem made by the family physician.

Drs. Freund, Livingstone, Hirschman, Robbins and Goux also discussed the paper.

At the meeting of the Surgical Section on the evening of April 22, 1912, Dr. G. Van Amber Brown read a paper entitled "The Newer Methods of Diagnosis of Bladder and Kidney Lesions." The paper was illustrated by a number of lantern slides. The doctor also exhibited a patient affected with arthostatic albuminuria, in whom a supernumerary rib on the right side had been found by means of the *x*-ray.

The election of officers for the Surgical Section took place at this meeting, resulting in the choice of Dr. F. B. Walker for chairman, and Dr. Raymond C. Andries for secretary.

Fifty-five members were present.

At the general meeting on the evening of April 29, 1912, the members of the Detroit Retail Druggists' Association were our guests. The subject for discussion was, "Emergency Cases—the Attitude of the Pharmacist and the Physician." Mr. Frederick Rohnert discussed the subject for the D. R. D. A., and Dr. James Cleland, Jr., for the W. C. M. S.

Upon vote of the Society, C. M. Wheeler, Dentist, Detroit, was admitted to associate membership.

Upon motion of W. J. Wilson, Jr., a joint committee of five members will be appointed by the president to study the question of the deterioration of certain drugs. The object of Dr. Wilson is to call the attention of the manufacturers of certain pharmaceuticals to this question and to obtain their cooperation in its correction.

Dr. F. W. Robbins, after some remarks in which he quoted from the Code of Ethics of the American Medical Association and also read from an advanced copy of the proposed change which will be voted on at the next meeting of the Association at Atlantic City, introduced the following resolution:

Whereas, There has been of late in the Medical Profession a growing tendency toward commercialism with a corresponding loss of ethical ideas;

Whereas, The president of the American Medical Association, in his annual address at Los Angeles, took a strong stand against the growing evil of paying commissions for referred cases and has been actively seconded by others, especially Dr. C. A. L. Reed in April *Pearson's;*

Whereas, Such dividing of fees as prevails in other communities is not unknown here, and is directly contrary to the Principles of Ethics as adopted by the American Medical Association:

Resolved, That a committee of five be appointed by the president to consider this matter in all its aspects, and that it report with recommendation at the first meeting in October next, when discussion may be full and such action as seems desirable be taken.

It was moved and supported that a committee be appointed to study the question of division of fees and report at the first meeting of the Society in October next.

Dr. A. N. Collins presented a picture to the Society of the late Dr. Donald McLean, as a gift from Mrs. Donald McLean. A vote of thanks was tendered to Mrs. McLean.

President B. R. Schenck and Secretary R. C. Jamieson presided. A luncheon was served.

Attendance 125.

Emergency Cases—the Attitude of the Pharmacist and the Physician

By Frederick Rohnert, for D. R. D. A.

Perhaps we are sometimes wrong in assuming that we know all about the effect of a remedy, we, as Pharmacists, dispense, for we have no intention of overstepping our office as Pharmacists. We do not wish to jeopardize anybody's health or life.

We are oftentimes compelled to apply remedies from humanitarian motives, alone. We know, perhaps, the good effects of some drugs, but we do not know what harm may result from their use. Since time immemorial the arts of healing and the preparing of medicaments have been closely allied. As time has passed a division of labor has taken place and later we see the development of the chemist and the physician as separate professions. My own memory goes back to the days of apprenticeship, my struggle with botany and the perusal of what seems to me now, crude text-books.

The physician at that time, generally speaking, was not the finished product he is to-day, for his required term of education was almost as meager as that of the pharmacist—time again has changed all this. Formerly it was considered legitimate for the pharmacist to recommend and sell his mixtures and receipts for simple complaints, he was often held in high esteem and persons came from great distances to consult him. The physician also had secret receipts and mixtures which he dispensed under similar circumstances. The combination of these two conditions has quite likely produced many "patent medicines."

The more distinct application of chemistry and pharmacy, and the wider and fuller knowledge of disease and healing by the physician have quite left the pharmacist out of place in the application of medicines. It is very natural for some persons for various reasons to come to a drug store and ask for relief.

I do not believe that a legitimate pharmacist would sell or prescribe a mixture simply for pecuniary gain.

Accident cases are so well cared for now by the police department that this can make but little call upon the druggist, but to protect and aid them while the ambulance is on the way.

There are many cases of headache and constipation that consult the pharmacist and he is driven to his wit's ends to dissuade them from taking drugs of questionable value. I believe we should advise this class of patients to consult a reputable physician, and this has always been my policy.

I absolutely think it wrong for a druggist to attempt to diagnose a case of illness or prescribe therefore, but do think it proper when the customer has made his own diagnosis, to sell to him such remedies as he may call for, provided it is of a non-poisonous nature—we must remember we are in the drug business for the purpose of selling drugs.

Emergency Cases—the Attitude of the Pharmacist and the Physician

By James Cleland, Jr., for W. C. M. S.

By "Emergency Cases" we mean first aid cases. The well meaning druggist has neither time nor does he care to assume the responsibility for the diagnosing and treatment of disease. In surgical emergency cases there is little for the druggist to do—protect the patient and await the surgeon or ambulance.

In the handling of medical cases greater latitude is allowed.

The druggist should keep in mind that any case, no matter how slight, has its relative importance.

Speaking in general, the first aid treatment of all cases coming into the hands of the druggist can be summed up in a few words:

1. Apply common sense principles in making the patient as comfortable as possible.

2. Give only the simplest forms of medicine.

3. Do not place yourself in a position in which you may be criticised.

The doctor can stand criticism, the druggist cannot.

The papers were discussed by Mr. R. W. Rennie, Mr. F. W. R. Perry, Dr. I. L. Polozker, Mr. W. A. Hall, Dr. H. W. Longyear, Mr. G. B. Simons, Mr. Charles F. Mann, Dr. W. J. Wilson, Jr., Dr. F. W. Robbins and Dr. L. J. Hirschman.

NEWS

Mr. Frank Van Leuven, an undertaker, has been reappointed Health Officer of Newaygo. It is reported that the physicians consider the salary of $12.00 per year as too small.

At the April meeting of the Board of Regents of the University Dr. Wm. F. Breakey resigned as Professor of Dermatology, retiring under the Carnegie Foundation. Dr. Breakey was President of the Michigan State Medical Society in 1903.

Hon. John F. Fitzgerald, Mayor of Boston, Mass., has advertised for applications for the position of chairman of the board of health of the city of Boston. The duties of the chairman and his two associates embrace the control of contagious diseases, inspection of milk, vinegar, provisions, tenements, etc., medical inspection of schools, management of a small-pox hospital and a quarantine station, and such other duties as might come before a board of health. The salary is $4,500 per year with a probable increase to $5,000. The appintment is made by the mayor subject to confirmation by the civil service commission and the new appointee will serve out two years of an unexpired term. The full term is three years. Applications should be addressed to the mayor.

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1912, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

Formicin is formaldehyde - acetamide, $CH_3.C.O.NH.CH_2.OH$, a molecular compound of formaldehyde and acetamide. It is a thick, syrupy, water-soluble liquid, having a faint formaldehyde-like odor and a slightly acid, bitter taste. Solutions of formicin liberate formaldehyde gradually at body temperature, and thus exert an antiseptic action. Formicin solutions are employed as injections into tuberculous and non-tuberculous joints, tissues and abscesses. Kalle & Co., New York (*Jour. A. M. A.*, April 6, 1912, p. 1014).

Iodo-Casein is a compound of iodine with milk casein, containing about 18 per cent. of iodin in organic combination. It is a powder, almost odorless and tasteless, and insoluble in water. It is said to undergo practically no change in the stomach, but to be quickly digested and absorbed in the form of soluble iodides, in the intestines. Dose, 0.3 to 1.3 gm. (5 to 20 grains). Iodo-Casein is also marketed in the form of tablets, each containing 0.15 gm. (2½ grains) and 0.3 gm. (5 grains) iodo-casein. H. K. Mulford Co., Philadelphia (*Jour. A. M. A.*, April 6, 1912, p. 1014).

Meningo-Bacterin is a meningococcus vaccine believed to be useful in immunizing against the meningococcus of Weichselbaum. H. K. Mulford Co., Philadelphia, Pa. (*Jour. A. M. A.*, April 13, 1912, p. 1114).

PHARMACEUTICAL PREPARATIONS OF ACCEPTED ARTICLES

L.-Suprarenin Synthetic Bitartrate Tablets, 0.001 gm., each containing 1-suprarenin synthetic bitartrate equivalent to 0.001 gm. (1/65 grain), 1-suprarenin synthetic (*Jour. A. M. A.*, April 13, 1912, p. 1114).

Colon Vaccine is a *Bacillus coli* vaccine, marketed in bulbs ready for use. Parke, Davis & Co. (*Jour. A. M. A.*, April 20, 1912, p. 1195).

Gonorrheal Vaccine (Combined) is a gonococcus vaccine containing *Micrococcus gonorrheæ* and *Staphylococcus albus, aureus* and *citreus* bacteria. Parke, Davis & Co. (*Jour. A. M. A.*, April 20, 1912, p. 1195).

Typhoid Vaccine (Prophylactic) is a typhoid vaccine containing *Bacillus typhosus* bacteria. Parke, Davis & Co. (*Jour. A. M. A.*, April 20, 1912, p. 1195).

Furunculosis Vaccine is a staphylococcus vaccine containing *Staphylococcus pyogenes aureus* bacteria. Parke, Davis & Co. (*Jour. A. M. A.*, April 20, 1912, p. 1195).

Acne Vaccine is a vaccine prepared from acne bacilli. Parke, Davis & Co. (*Jour. A. M. A.*, April 20, 1912, p. 1195).

Combined Bacterial Vaccine is a vaccine containing bacteria of mixed *Streptococcus pyogenes, Staphylococcus pyogenes aureus, S. pyogenes citreus, Bacillus coli communis* and *Diplococcus pneumoniæ*. Parke, Davis & Co. (*Jour. A. M. A.*, April 20, 1912, p. 1195).

Since March 26 the following articles have also been accepted for inclusion with New and Nonofficial Remedies:

L-Suprarenin Synthetic Bitartrate Tablets (V. Koechl & Co.).

Colon Vacine (Parke, Davis & Co.).

Gonorrheal Vaccine (Combined) (Parke, Davis & Co.).

Typhoid Vaccine (Prophylactic) (Parke, Davis & Co.).

Furunculosis Vaccine (Parke, Davis & Co.).

Combined Bacterial Vaccine (Parke, Davis & Co.).

Acne Vaccine (Parke, Davis & Co.).

Novocain Tablets "D" (Victor Koechl & Co.).

Novocain Tablets "F" (Victor Koechl & Co.).

Novocain Suprarenin Tablets "A" (Victor Koechl & Co.).

Novocain Suprarenin Tablets "B" (Victor Koechl & Co.).

Novocain Suprarenin Tablets "C" (Victor Koechl & Co.).

Novocain Suprarenin Tablets "E" (Victor Koechl & Co.).

Proferrin (H. K. Mulford Co.).

Proferrin Tablets, 1 gr. (H. K. Mulford Co.).

Proferrin Tablets, 2½ grs. (H. K. Mulford Co.).

Proferrin Tablets, 5 grs. (H. K. Mulford Co.).

Meningo-Bacterin.

Tyramine (Burroughs Wellcome & Co.).

Tuberculin-Rosenbach (Kalle & Co.).